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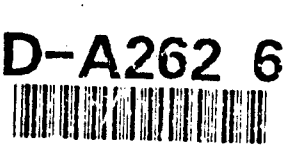

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CULTURAL RESOURCES SURVEY, WITHOUT TESTING, OF THE NONCONNAH CREEK PROJECT, SHELBY COUNTY, TENNESSEE

A NEGATIVE FINDING REPORT

Coastal Environments, Inc.
1260 Main Street
Baton Rouge, La. 70802

1987

Final Report

Prepared for:

Department of the Army
Memphis District
Corps of Engineers
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CULTURAL RESOURCES SURVEY, WITHOUT TESTING, OF THE NONCONNAH CREEK PROJECT, SHELBY COUNTY, TENNESSEE

A Negative Finding Report

By
Gerald P. Smith
and
Richard A. Weinstein

1987

Performed under Contract with the
Memphis District, U.S. Army Corps of Engineers
(Contract No. DACW66-87-C-0025)

Coastal Environments, Inc.
1260 Main Street
Baton Rouge, Louisiana
70802

Richard A. Weinstein
Co-Principal Investigator
Member, SOPA

Gerald P. Smith
Co-Principal Investigator

ABSTRACT

An intensive, on-the-ground cultural resources survey of the proposed Nonconnah Creek project right-of-way is reported upon in this study. No prehistoric sites were located, and no structures older than 50 years could be found.

In an effort to offset this lack of survey data, information is presented that originally was acquired from sites within the Nonconnah Creek drainage that no longer are extant due to land filling, construction, and channelization activities over the past 30 years. These data are used to synthesize the culture history of the region and to compare it to adjacent regions in Tennessee, Arkansas, and Mississippi.

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PREFACE AND ACKNOWLEDGEMENTS

During December 1986, the Memphis District of the U.S. Army Corps of Engineers contracted with Coastal Environments, Inc. (CEI) to conduct a "Cultural Resources Survey Without Testing of the Nonconnah Creek Project, Shelby County, Tennessee." CEI was charged with the task of intensively surveying all areas to be affected by dredging and widening of the creek, from its mouth upstream for a distance of 18.2 miles.

Fieldwork and historical research for the project began on 4 January 1987, with an informal tour of the project area, and continued through 31 January 1987, with additional historical research, the intensive survey, and a detailed shovel-testing program. The actual fieldwork was carried out by two 2-man crews, each consisting of one of the Co-Principal Investigators and an archaeological assistant.

The overall study was performed primarily in compliance with ER 1105-2-460, Identification and Administration of Cultural Resources, Federal Register, Volume 43, Number 64, dated Monday, 3 April 1978. Additional Federal laws and regulations which made this project possible are as follows:

Public Law 59-209, Antiquities Act of 1906 (34 Stat. 225, 16 U.S.C. 431-433) 1970

Public Law 74-292, Historic Sites Act of 1935 (49 Stat. 666, 16 U.S.C. 461-467) 1970

Procedures of the Advisory Council on Historic Preservation (36 CFR 800)

Public Law 89-665, National Historic Preservation Act of 1966

Public Law 91-190, National Environmental Policy Act of 1969 (83 Stat. 915, 42 U.S.C. 4321) 1970

Executive Order 11593, Protection and Enhancement of the Cultural Environment (36 FR 8921) 1971

Public Law 93-291, Archeological and Historic Preservation Act of 1974

Recovery of Scientific, Prehistoric, Historic, and Archeological Data: Methods, Standards, and Reporting Requirements (36 CFR 66)

As with any major archaeological undertaking, numerous individuals contributed much time and effort to completion of this study. Those identified below deserve a great deal of credit for their participation in this project. If the authors have accidently omitted anyone involved, apologies are offered.

Jim McNeil, archaeologist with the Memphis District, oversaw the project from the Corps' end. He provided valuable assistance in locating historic maps and related data, and supplied CEI with all necessary project information.

Shawn Chapman and Rosemary Swanson of Memphis served as archaeological assistants throughout the fieldwork portion of the project. Their dedication to the project is recognized and appreciated.

David H. Dye of Memphis State University and his wife, Debbie, offered their home as residence for Weinstein during a portion of the fieldwork. Their hospitality is gratefully acknowledged.

Kay Smith, wife of Co-Prinicipal Investigator Gerald Smith, also offered her home to Weinstein for several evenings while research strategies were planned and discussions between the two PIs took place.

CEI office personnel contributed to the study. Curtis Latiolais drafted most of the figures for the report, while Linda Abadie typed both the draft and final versions of the study.

Lastly, it should be noted that each of the authors initially wrote different chapters of the report. Smith authored Chapters 2, 3, and 6, while Weinstein contributed Chapters 1, 4, 5, and 7.

CHAPTER 1: INTRODUCTION

The Nonconnah Creek channel-improvement project is located along the lower portion of Nonconnah Creek, in the southern part of Shelby County, Tennessee (Figure 1-1). The project extends from the mouth of the creek at Lake McKellar upstream for a distance of 18.2 mi. Almost the entire length of the project is situated within, or adjacent to, the city limits of Memphis.

As will be discussed more thoroughly later, Nonconnah Creek was once a meandering stream flowing within a relatively broad floodplain. Today, it has been channelized to a high degree, and most of its floodplain has been filled and converted into property suitable for urban expansion associated with the growth of Memphis. Because of these factors, very little of the original floodplain remains intact today, and what little archaeological information there is had been collected prior to major urbanization. Unfortunately, as will be seen, these data are sketchy at best, and precise site locations are lacking in almost all instances. Nevertheless, this is the only information currently available, and, if the results of the present survey are an indication of the potential future data yield, then this information may well be the only data ever retrieved from the Nonconnah Creek drainage.

Thus, in order to offset such a pronounced loss of the area's cultural resources, and once it was certain that the present survey would contribute little, or nothing, to the overall data base, it was decided to expand the original goals of the present study to include a detailed synthesis of previously recorded information on sites in the drainage. The bulk of the following report, therefore, concerns itself with this synthesis. It is hoped that this will provide a useful contribution to the archaeology of southwest Tennessee.

Plan of the Report

The following chapters provide the necessary background data, field information, and site descriptions which will, hopefully, contribute to both the management requirements of the Memphis District, and to archaeological knowledge of the region. Chapter 2 is intended to provide general information on both the present and past environments of the study area. Discussions on the geology, and floral and faunal resources are included. Chapter 3 details a similar overview, designed to familiarize the reader with previous archaeological research and the known culture sequence of the region.

Chapter 4 presents the research design developed for the project. Specific research topics are discussed.

Chapter 5 relates details on survey requirements, survey methodology and survey results. Unfortunately, since no sites older than 50 years were found, this chapter is rather short and concise.

Chapter 6 presents the synthesis of sites within the Nonconnah Creek drainage, as noted above. It includes a detailed review, by culture period, of the sites, their components, and diagnostic artifacts.

Conclusions and recommendations are presented in Chapter 7, and includes a summary of the contributions of the present study to the research problems identified in Chapter 4.

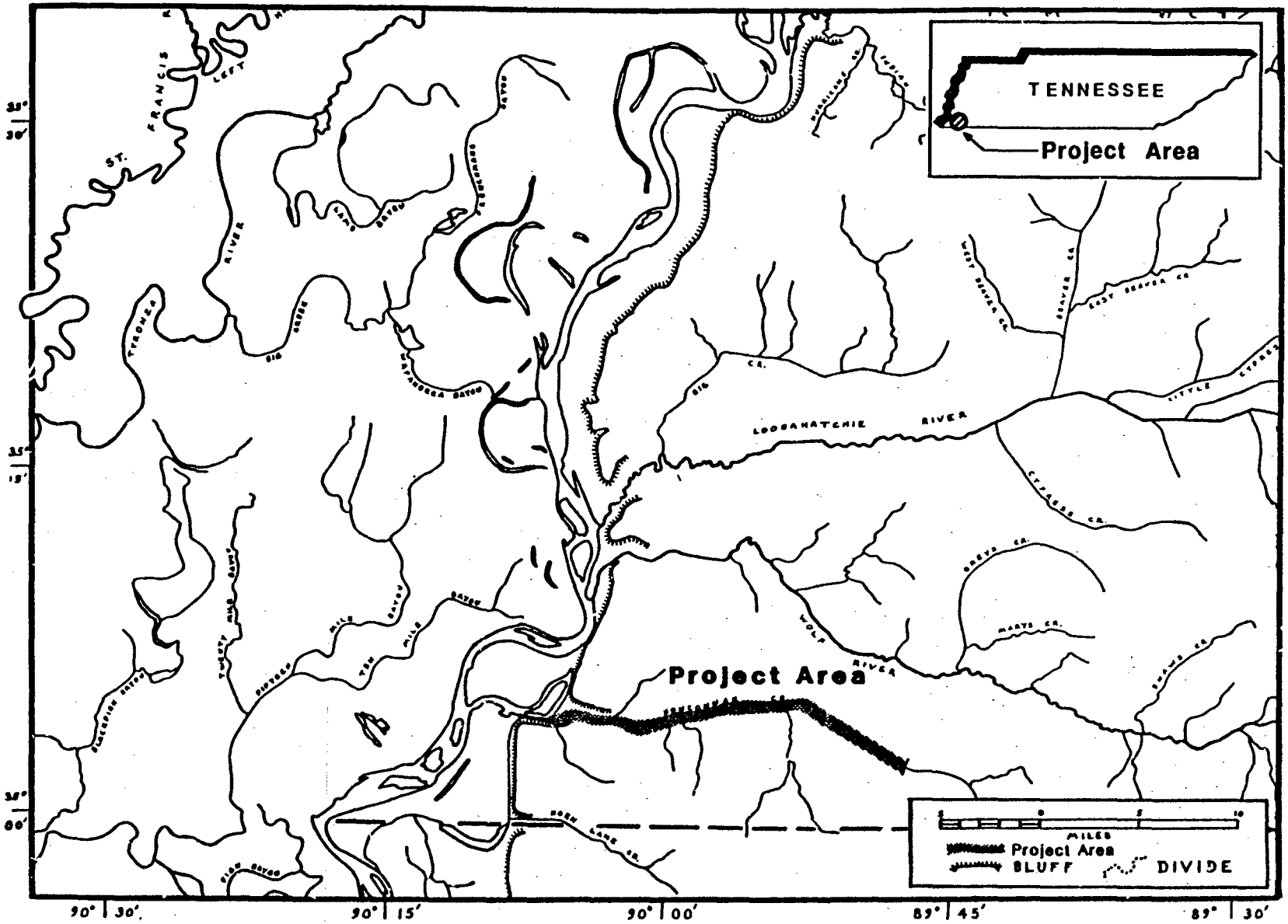

Figure 1-1. Location of the Nonconnah Creek project in the southwestern corner of Tennessee.

CHAPTER 2: ENVIRONMENTAL SETTING AND RESOURCE POTENTIAL

Nonconnah Creek is a medium-sized stream in southwestern Tennessee which now drains directly into the Mississippi River from the loess uplands. It was a meandering stream with a broad floodplain until channelization during this century. Recent vegetation consisted of gum-cypress swamp forest in the floodplain and oak-hickory in the upland portion of the drainage.

At the height of the last half of the Wisconsin glaciation, about 21,000 to 15,000 B.C., the Ohio River occupied the present Mississippi River valley east of Crowley's Ridge and was downcutting previous valley fill in response to the lowered sea levels of the time. Recent studies in the mid-continent region suggest that temperatures during this period averaged about 12° C (22° F) below present (Brister et al. 1981:30), but remained above -40° C (-40° F) (Delcourt et al. 1980:13). Vegetation consisted of spruce-northern pine forest on the uplands, with beech, red maple, black walnut, sweet gum, and other hardwoods surviving in sheltered areas.

By about 15,000 B.C. a gradual warming trend began the final retreat of the Wisconsin ice sheet and the refilling of the Mississippi River valley with glacial outwash. It was also at this time that the Mississippi River cut through Crowley's Ridge at the Bell City-Oran (Missouri) Gap and joined with the Ohio River in forming a complex braided-stream pattern between Crowley's Ridge and the eastern bluff line. Filling of the valley ultimately reached a higher elevation than the present surface of most of the valley floor north of Memphis; this earlier surface survives in remnant form in such features as Malden Plain in southeastern Missouri and remnant braided stream terraces in western Dyer and Lauderdale Counties in Tennessee. Renewed loess deposition in the uplands accompanied development of the extensive braided-stream formation with its large areas of bare soil. Valley filling continued until about 9000 B.C. when glacial retreat reopened the St. Lawrence River valley as the primary outlet for glacial meltwaters.

Climatic warming was also accompanied by resurgence of such deciduous forest species as oak, ash, hickory, beech, maple, walnut, and birch. Replacement of the northern coniferous forest may have been virtually complete by as early as 10,500 B.C. This forest transition would have greatly increased the carrying capacity of the area for all modern game species, but removed the boreal forest habitat apparently favored by the mastadon. Continued warming to conditions somewhat cooler than present during the period between 10,000 to 5,000 B.C. led to a mesic deciduous forest, including a few conifers, beech, birch, elm, ash, maple, oak, hickory, walnut, and chestnut. Warming and drying of the climate peaked between 5,000 and 3,000 B.C. with conditions somewhat warmer and dryer than at present. During this period the species requiring cool, moist conditions were sharply reduced and the modern oak-hickory dominance was established in the upland portion of the drainage. Major habitat zones included floodplain, terrace, and upland areas.

Two apparent terrace surfaces are definable in the drainage, one at 6 to 10 ft above the modern floodplain, with the other at 12 to 17 ft above the floodplain and 6 to 10 ft above the lower terrace. Both terraces are level from Valley Mile 4 to Valley Mile 10, a pattern shared by other terraces adjacent to west Tennessee streams tributary to the Mississippi River, and are thought to date from a time during, or just before, the Wisconsin glaciation (Smith 1980; Saucier n.d.). They would correspond to Saucier's Finley Terrace and Smith's T-2a or T-1 (lower) terraces, and to Saucier's Hatchie Terrace and Smith's T-2b (upper) Terrace in adjacent drainages. The controlling factor

in their formation is viewed as the level of glacial outwash and its subsequent downcutting. Saucier attributes the Finley Terrace to Early Wisconsin events prior to 30,000 B.C. and the Hatchie Terrace to the Sangamon Interglacial, between 120,000 and 80,000 B.C. Due primarily to a lack of dissection of the loess and loess/silt terraces, it may be reasonable to consider the Finley/T-2b or T-1 terrace as dating to between 15,000 and 10,000 B.C., during the period of glacial outwash build-up in the Mississippi Valley, and the Hatchie/T-2 surface as corresponding to the outwash build-up which occurred at the end of the Early Wisconsin glaciation prior to 30,000 B.C. Unfortunately, the Nonconnah Creek mastodon find (Brister et al. 1981) offers little help in resolving the problem since it was not associated with a terrace and dates to the height of the Late Wisconsin glaciation around 18,000 to 20,000 B.C. Terraces of lower elevation, which presumably are more recent and definable in other western Tennessee drainages (Smith 1980), are not recognizable in the Nonconnah Creek valley.

The ecological effects of the terraces are unknown for the premodern forest types, but they are of significance in the modern context. Review of terraces in adjacent drainages (Smith 1979a, 1979b, 1980) indicates that Grenada, Calloway, and Henry soils characterize the terraces, while Waverly and Falaya soils make up the current floodplain. The uplands are composed mainly of Memphis, Loring, and Grenada soils. Of crucial importance in this context is the tendency of shagbark and scalybark hickories to form groves on Grenada and Calloway soils on terraces, while the upland species are predominantly those too high in tannic acid for human use without special processing. Other important terrace forest species would have been pin oak, red oak, cottonwood, sycamore, sweet gum, and persimmon. The variety of understory species includes vines, shrubs, herbaceous plants, and cane. Floodplain forests include tupelo, red gum, cypress, willow, and a variety of other tree species. As with the upland, cane is an important understory species, along with a wide variety of shrubs, vines, and seasonal herbs.

Upland forests consisted of red and white oaks with upland hickories as the primary species. Major secondary species included elm, chestnut, yellow (tulip) poplar, sweetgum, and walnut in the canopy, and dogwood, cherry, mulberry, persimmon, sassafras, and winged elm in the understory. Again, a wide range of shrubs, vines, and herbs is present. Plant resources are thus generally diffuse in distribution, except for the seasonal occurrence of shagbark and scalybark hickory nuts in groves on terraces.

The primary game animals of the area are white-tailed deer, turkey, rabbit, black bear, opossum, and raccoon. Ducks, geese, and passenger pigeons would have been important seasonal game species. Fish and turtles would have been available in permanent streams of the drainage such as Black Bayou and Nonconnah, Cane, and Johns Creeks, as well as seasonal streams and ponds. Animal food resources may thus be characterized as diffuse in nature except for possible seasonal concentrations of migratory birds.

Lithic resources occur within the drainage as chert and quartzite gravels outcropping from below the Pleistocene loess in the eastern portion of the drainage, in the bed of Nonconnah Creek, and at the base of the Mississippi River bluffs. Other key resources, such as ferruginous siltstone for grinding tools, are available only from outside the drainage. Ferruginous sandstone and siltstone are readily available in a broad band stretching through west-central Tennessee and central Mississippi, occurring within 30 miles east of the drainage basin. The ferruginous siltstone was widely used in the region for atlatl weights, gorgets, celts, and a variety of generalized rough bifacial tools.

Resource distribution in the drainage thus includes those of diffuse distribution, such as most of the plants and game mammals, and those of linear distribution such as lithic and aquatic resources. The key concentrated resources include fall shagbark and scalybark hickory nuts in the groves on Grenada and Calloway soils on terraces, and fall and spring migratory waterfowl in areas of seasonally standing water. Storable hickory nuts thus appear to be the most strategic resource in concentrated distributions in contexts adjacent to lithic, aquatic, and upland resources at the beginning of the season when storable food supplies would be most crucial to the survival of nonagricultural human populations.

The very conditions which appear to favor the formation of shagbark and scalybark hickory groves, namely a shallow fragipan producing waterlogged soil through late spring or even early summer (Flowers 1964:6, 11), also sharply reduce the utility of these soils for agriculture. Such soils are difficult to work until late in the planting season, are subject to wet-year moisture damage to crops, and provide an effective barrier to root growth during dry years.

Agricultural activities tend to focus on better-drained soils such as Collins, Memphis, Loring, or upland Grenada soils. Collins soils are usually too low in this drainage for effective use, but represent the general class of sandy soils particularly favored by agriculturalists using hand tools. Loess soils such as Memphis and Loring tend to be used effectively only by those equipped with iron or steel implements, usually operated with draft animals or machines to augment human physical strength.

Environmental factors would thus appear to favor several different subsistence-settlement considerations. The diffuse distribution of the primary game animals suggests that hunting activity would occur throughout the drainage with little point concentration other than a search for seasonal waterfowl. Sharp restriction of the distribution of shagbark and scalybark hickory resources suggest that areas of Grenada and Calloway soils on terraces would have been particularly important for fall gathering activities. Sandy soils are generally considered of particular importance to agriculturalists using only hand tools, provided that drainage conditions are suitable. The upland loessic soils would have been of particular agricultural interest to nineteenth-century Euro-American settlers with their iron plows, but not to prior occupants without such equipment.

CHAPTER 3: CULTURAL SETTING

This chapter includes three main sections designed to familiarize the reader with both previous archaeological research in and adjacent to the project area, and the culture history of the region.

Previous Research

The primary data on the Nonconnah Creek drainage is provided by survey work conducted during the mid-1950s by Mack S. Pritchard, and during the period of 1968-71 by Gerald Smith and various staff members of Chucalissa Museum, Memphis State University Department of Anthropology. Various sporadic, small-scale checks have produced additional sites.

Most of the sites located during the 1950s were destroyed by freeway construction, although a few still survive in the upper portion of the drainage. The collections from this period are limited to ceramics and worked lithics. Most collections from the 1968-71 period were grab samples intended to recover the entire range of materials present on the sites; most of the sites had been stripped of worked lithics prior to this survey. The locations of previously recorded sites were rechecked whenever possible during the present survey.

Cultural remains span the full time range of prehistoric human occupation in the region. Historic period archaeological remains were not specifically sought during any of the earlier surveys, although some post-1870 materials were recovered incidental to the prehistoric site-oriented survey after 1968. Most survey work was restricted to terraces, the floodplain, and ridge tips extending into the floodplain. The uplands were mostly in subdivisions, pasture, or overgrown fields by the post-1968 period except for scattered areas of row-cropping in the southeastern margins of the drainage. The survey of one such area along a small, seasonal tributary revealed numerous small lithic scatters, as did another in a development area near Memphis International Airport.

Previous research efforts thus provide a body of prehistoric data focussed primarily on the floodplain and adjacent areas. Rapid urbanization and intensive relic-collecting activities drastically changed the nature of the surviving resource base, and the accessibility of that portion which remained by the time of the second major survey period. Lack of debitage from sites recorded in the early work and a shortage of diagnostic artifacts in the later work seriously hampers an integrated study of the data recovered from the two survey periods. Rechecking of most of the sites is no longer possible due to their destruction by urban development, usually shortly after discovery. Test pits excavated on several of the sites by Memphis State University personnel during the 1960s revealed only plow zone and subsoil on the sites tested. Most sites with recorded diagnostics appear to be multicomponent.

Primary contributions possible from the extant data base include:

1. Determination of cultural periods of occupation represented in the drainage.

2. Limited correlation of activities and cultural period occupations with soil/topographic associations.

3. Limited study of settlement patterns within the drainage during the various cultural periods.

4. Limited comparisons with data from adjacent areas.

Sites recorded in the drainage are listed in Table 3-1.

Literature Search

The literature on the Nonconnah Creek drainage proper consists entirely of environmental impact studies done for various agencies. Numerous studies of neighboring areas exist and are heavily drawn upon for comparative data in the various reports. All of the reports involved are primarily based upon survey work conducted between 1955 and 1971. Most of the materials from the pre-1968 surveys were unavailable for study until quite recently, while most of the sites recorded during the 1968-1971 period had already been stripped of most diagnostic artifacts by the time they were found by archaeologists.

Early reports by Smith (1971, 1974) provide brief summaries of significant sites by identifiable components represented, but provide no artifact descriptions or data summaries. Additional fieldwork in the form of random transects was conducted in 1979 by Gilbert Commonwealth Associates, Inc. (1981) but produced no additional sites and little new information about the previously recorded ones.

In addition to published accounts on the cultural resources of the Nonconnah Creek drainage, several other potential sources of information were checked. These included site records on file at the Chucalissa Museum, Memphis State University, dredge and fill records at the Memphis District office of the U.S. Army Corps of Engineers, and maps, reports, and aerial photographs at the Memphis Room of the Memphis Public Library. Particularly useful were 1940s and '50s 15-minute quadrangle maps and 1931 and '63 aerial photographs of the project area. This review indicated that one site (40 SY 25) may have once been within the project area, but had been destroyed by construction of Interstate 240. Five additional sites (40 SY 32, 34, 41, 54, and 90) were possibly within the project area, but each lacked specific locational information to accurately pinpoint its true position. In addition, two house or building locations shown on the 1941 and 1955 Bartlett and Memphis 15-minute quadrangles were recorded within the project area.

Cultural Background

General Summary

The cultures represented in the Nonconnah Creek drainage fall within the basic framework of western Tennessee as outlined in studies of the other Mississippi River drainages (Smith 1972a, 1979c, 1980; Peterson 1979a, 1979b). The primary prehistoric cultural periods include Paleoindian, Archaic, Woodland, and Mississippian, each with various subdivisions based on time span and content.

Paleoindian components are characterized by a variety of large, fluted projectile point types; scrapers, perforators, and gravers often made on ribbon-like blades of flint or chert; and prepared cores from which blades were struck. Flakes and nonblade cores are also present, but not distinct from those of later periods. Subsistence is conventionally considered to have been based primarily upon hunting large game animals. Social and settlement systems are thought to have consisted of small bands

Table 3-1. Archaeological Sites Recorded in the Nonconnah Creek Drainage.

Site No.	Identifiable Periods of Occupation*	Condition or Land Use
40 SY 3	EW, M	overgrown
40 SY 6	M	destroyed - industry
40 SY 7	PI, EA, PP, EW	destroyed - subdivision
40 SY 23		destroyed - industry
40 SY 24		destroyed - industry
40 SY 25		destroyed - I-55
40 SY 29	EA, PP, E/MW	destroyed - commercial
40 SY 30	EW, MW, M	destroyed - I-240
40 SY 31	PP, EW, MW	destroyed - I-240
40 SY 32	MA, PP, M	destroyed - I-240
40 SY 34	MA, PP, EW	destroyed - I-240
40 SY 35	EW, MW, LW, M	destroyed - I-55
40 SY 36		destroyed - subdivision
40 SY 37	PP, EW, MW, M	destroyed - development
40 SY 38	EA, MA, LA, PP, EW, MW, LW, M	destroyed - elec. substation
40 SY 39		destroyed - development
40 SY 40	EA, MA, LA, PP, EW, MW, LW, M	destroyed - development
40 SY 41	LA, PP, EW, MW	destroyed - development
40 SY 42		destroyed - development
40 SY 43	PP, EW, MW	destroyed - I-240
40 SY 44	PP	destroyed - elec. substation
40 SY 45	EA, MA, LA, PP, EW, MW, M	destroyed - development
40 SY 46	EA, PP	destroyed - I-240
40 SY 47	EA, PP, EW, MW	destroyed - industrial
40 SY 48	LA, PP	destroyed - development
40 SY 49	PP, EW, LW, M	destroyed - development
40 SY 50	PP	destroyed - I-240
40 SY 51	E/MW	destroyed - development
40 SY 52	EW	destroyed - development
40 SY 53	EW, MW	destroyed - development

Table 3-1 continued.

40 SY 54		destroyed - development
40 SY 55	PP, EW, MW	destroyed - development
40 SY 56	MA, LA, PP, EW, MW, M	destroyed - development
40 SY 57	MA, LA, PP, EW, M	destroyed - development
40 SY 58	PP, EW, M	overgrown
40 SY 59	PP	destroyed - development
40 SY 70		destroyed - development
40 SY 72		destroyed - development
40 SY 78		destroyed - development
40 SY 80		agriculture
40 SY 81	MW, M	destroyed - I-240
40 SY 85		destroyed - street widening
40 SY 86		destroyed - development
40 SY 87	EM, MW	overgrown
40 SY 90	EA, PP, EW, MW	destroyed - development
40 SY 91		destroyed - road and park
40 SY 112	EW, MW	destroyed - developed
40 SY 114		destroyed - development
40 SY 115		destroyed - development
40 SY 118	EW	overgrown
40 SY 119	EW	destroyed - development
40 SY 120	PP	destroyed - development
40 SY 121	EW	destroyed - development
40 SY 122		overgrown
40 SY 123		overgrown
40 SY 124	PP	agricultural
40 SY 125	EW	agricultural
40 SY 126		agricultural
40 SY 127		agricultural
40 SY 128	EW	destroyed - nursery
40 SY 129	EM, MW	destroyed - nursery
40 SY 130		destroyed - nursery
40 SY 131		destroyed - nursery
40 SY 132		destroyed - nursery

Table 3-1 concluded.

40 SY 212	EW	destroyed - ditch lining
40 SY 227	EW	overgrown
40 SY 228		overgrown
40 SY 229		overgrown
40 SY 230		destroyed - nursery
40 SY 230		overgrown
40 SY 231	PP, M	destroyed - borrow and pipeline
40 SY 256	EW	agricultural
40 SY 257		agricultural
40 SY 258		agricultural
40 SY 259		agricultural
40 SY 260		destroyed - development
40 SY 261		agricultural
40 SY 262		agricultural
40 SY 264		agricultural
40 SY 265		agricultural
40 SY 266		agricultural
40 SY 267		agricultural
40 SY 268		agricultural
40 SY 269	EW	agricultural
40 SY 270		agricultural
40 SY 272		agricultural
40 SY 273		agricultural
40 SY 274		agricultural
40 SY 275	EW, MW	agricultural
40 SY 276	EW	agricultural
40 SY 277	EW	agricultural
40 SY 278		agricultural
40 SY 281		destroyed - development
40 SY 307	EW, MW	agricultural

PI = Paleoindian; EA = Early Archaic; MA = Middle Archaic; LA = Late Archaic; PP = Poverty Point; EW = Early Woodland; MW = Middle Woodland; LW = Late Woodland; M = Mississippian.

of kinsmen following the movement of game animals, often Pleistocene megafauna. The estimated time span of this period is about 10,000 to 8500 B.C.

The Archaic period is a long post-Pleistocene period characterized by progressively increasing emphasis on plant foods as the primary subsistence base, along with increasing social complexity. Introduction of woodworking tools and grindstones, along with use of a variety of notched projectile points characterizes the Early Archaic. The points appear designed for use with spear throwers on swift-moving game such as deer rather than as thrusting spears usable on slow-moving game unlikely to flee. The blade tools characteristic of the Paleoindian period seem to have gone out of use by the end of the Early Archaic. Lower-grade and/or smaller-sized raw materials locally available replaced the relatively uncommon grades and sizes of raw material necessary for the blade-based tools and weapons. The Early Archaic is generally thought to range from about 8500 to 5500 B.C.

Middle Archaic components in neighboring areas are characterized by stemmed projectile points, often large and formed by minimal flaking, and ground stone tools and ornaments. The period is particularly poorly known in the region. A time span of about 5500-3500 B.C. or even as late as 2000 B.C. is often cited for the period.

The Late Archaic is characterized by a variety of large-stemmed point types, ground stone tools and ornaments. Many sites of the period are much larger than those of previous periods. It was during this period that a series of incipient changes occurred in the subsistence and social systems; changes that would continue through the rest of the prehistoric sequence. Among these were the beginnings of plant domestication, long-range trade in exotic raw materials and finished items, and increasingly complex social organization with definable status positions. Subsistence patterns emphasize exploitation of seasonally concentrated resources. Regional stylistic traditions of distinctive point types occur throughout the eastern United States, involving much smaller areas than in previous periods. The Nonconnah drainage lies at the frontier between one tradition centered in the northern Mississippi Alluvial Valley and another centered in the western portion of the Tennessee River valley.

The time span of the Late Archaic period varies considerably from one area to another, basically from the local end of the Middle Archaic to the beginning of the following period. The beginning of the period in the Midsouth is variably placed at either about 3500 B.C. or 2000 B.C., depending on the assignment of the Benton complex; the 3500 B.C. date will be used here. The end date of the period also varies according to the treatment and definition of the following period, usually Woodland. The nonpottery-using Poverty Point cultural tradition of the Mississippi Valley has variously been considered part of the Late Archaic, a separate cultural period in its own right (Phillips 1970), or ambiguously labelled "Transitional" (Peterson 1979a, 1979b). The Poverty Point-related cultures will here be considered part of a separate Poverty Point period, thus placing the end of the Late Archaic at about 1500 to 1000 B.C. in the Midsouth.

The Poverty Point period is a cultural phenomenon restricted to the Mississippi River alluvial valley and adjacent areas. It is marked by a distinctive series of projectile point, tool, and ornament types and by fired clay objects of various styles apparently used in earth-oven cooking. Particularly distinctive items, other than the point types, are a microblade industry and insect-effigy stone beads. The focal site of the period in northern Louisiana was involved in extensive trade with contemporary cultures generally considered Late Archaic and/or Early Woodland, and is known to have

utilized items from as far away as Indiana. The time span of the period approximates 1500-400 B.C., with some local variation.

The Early Woodland period in the Nonconnah Creek area is marked by the appearance of local ceramics, although complexes to the east, which are usually considered Late Archaic, had already been using pottery for several centuries. Point styles are derived from previous late Poverty Point styles. Burial mounds are thought to have come into use during this period. The local ceramic styles are typical of those of the lower Mississippi River valley, although the use of sandy ceramic paste and cordmarked surface finishes appear by the end of the period. A time span of about 400 B.C. to A.D. 100 would be the likely maximum for the period locally, with a span as short as 200 B.C. to A.D. 1 possible.

Middle Woodland culture in the Midsouth is most closely related to the Miller tradition derived from the upper Tombigbee River drainage. It is characterized by sand-tempered ceramics with plain and cordmarked surface finishes. Point styles appear to continue the stemmed forms of the previous period. Burial mounds continue in use, while flat-topped mounds also appear at some major centers. An estimated time span for the period is about A.D. 100-400.

Late Woodland occupation in the area is closely tied to the Mississippi River alluvial valley and immediately adjacent areas. Characteristic artifacts include clay-tempered plain, cordmarked, and check-stamped pottery; and small, thin stemmed-to-corner-notched points probably used on arrows. Burial mounds continue in use. The approximate time span of the period is A.D. 400-900.

Mississippian culture in the area is also closely tied to the Mississippi River alluvial valley. It is characterized by plain, incised, engraved, and painted ceramics in a variety of forms; triangular and willow-leaf-shaped arrow points; a hierarchy of site forms ranging from camps, hamlets, and villages, through villages with one or two mounds facing a central plaza, to major centers with multiple large platform mounds facing one or more plazas. Large-scale corn agriculture, supplemented by other crops, hunting, and fishing provided the subsistence base. Social systems may well have involved tribes at the beginning of the period, but are generally considered to have become complex chiefdoms by period's end. Early Mississippian ceramics are relatively simple and clay-tempered, but the change to shell-tempered wares had taken place by about A.D. 1200. The total local span of the period approximates A.D. 900-1550. The period was probably effectively ended locally by a virtual total depopulation brought about through epidemics of European and African diseases immediately after the passage of the DeSoto expedition through the area in 1541.

The colonial/pre-Jackson Purchase period is very poorly known for the area. There appears to have been little or no permanent occupation until the establishment of a Spanish fort at the mouth of Wolf River in 1793 (S. Smith 1982) and its associated trading post activity. The Marquette and Joliet, LaSalle, and other expeditions passed by or through the area without leaving a known trace, as did the Bienville expedition of 1736 which the French launched against the Chickasaw. Little is known of the pre-1818 settlement of scattered squatters over the area. After the Jackson Purchase of western Tennessee and Kentucky from the Chickasaws in 1818 legitimized Anglo-American settlement, the area filled rapidly.

Most of the primary towns and roads in Shelby County were established by 1840, although the smaller towns often did not hasten into the formalities of a charter or government until later. The "Poplar Avenue Corridor" along the Wolf-Nonconnah

drainage divide was a major route of travel even before the founding of Memphis and has been the main route of urban expansion. Germantown lies on this corridor north of the central part of the drainage and Collierville along it near the headwaters. Other major routes through the drainage are Lamar/Pigeon Roost Road leading into northeastern Mississippi, and U.S. 51/Hernando Road leading south through central Mississippi to Jackson and New Orleans. These routes were all used extensively during the Civil War, but no significant military construction or battles took place in the area. Most of Nonconnah Creek drainage remained primarily rural in character until the early 1950s, when urban development around the perimeter of Memphis began to fill most of the northwestern quadrant. Urban expansion had covered most of the lower two-thirds of the drainage and affected most of the floodplain in the the lower half by 1975.

CHAPTER 4: RESEARCH DESIGN

The research design for the Nonconnah Creek survey actually was a relatively simple set of tasks initially established in the Corps' scope of work: (1) conduct the survey and obtain site surface collections within the framework of a regional research design; (2) examine the historic and prehistoric environmental setting and cultural background of the area; (3) perform an intensive, on-the-ground examination of the survey area using subsurface shovel tests in areas of poor ground visibility; (4) conduct systematic surface collections at all sites located during the survey; (5) make recommendations for additional testing, including test units, on a site-specific basis; and (6) complete all date analyses necessary to prepare a comprehensive report of the findings.

In response to these requirements, CEI provided in its proposal a set of four potential research frames which would be used to guide the overall investigations. These included: (1) an examination of the paleogeography of the survey area, through geomorphological and environmental reconstruction. The main aim of this goal was to identify the relationship between cultural remains and the surrounding environment, particularly through time, by developing a synthesis of human settlement in the area; (2) an examination of prehistoric cultural variability, as expressed in the ceramics, lithics, settlement patterns, or other recognizable variables in the area. These variables could then be compared to those from adjacent regions, and, hopefully, a better understanding of the archaeology of the region would be achieved; (3) an examination of the culture history of the Nonconnah Creek area. This research goal, although intertwined with those of the first two goals, was perhaps the most critical, as the Nonconnah Creek area had never been entirely studied, and no detailed reports on its culture history had been prepared. As will be seen, because of the massive landscape alterations to the area in recent years, much of this research aspect relied upon data acquired over 20 years ago; and (4) an examination of the cultural variability within the historic context of the area. This was to include research into the historic settlement of the Nonconnah Creek area during the eighteenth, nineteenth, and early-twentieth centuries.

Unfortunately, as touched upon earlier, very few of these research frames could be adequately addressed as the survey area has been extensively altered by land fills, highway and building construction, and creek channelization. No sites were located which could be used to help answer the questions posed above, although previously acquired information dating from the 1950s, '60s, and early '70s, was synthesized in an effort to examine the culture history and regional variability of the Nonconnah Creek drainage. In fact, this aspect of the research forms the bulk of the remainder of the present report.

In order to more adequately assess the historic potential of the survey area, an effort was made to track down and examine as many historic maps as possible which pertained to Memphis and surrounding regions. Approximately 30 maps were thus reviewed at the Memphis Room of the Memphis Public Library and at Memphis State University. Only two of these maps showed any structures in the general Nonconnah Creek area, as most of the maps did not extend very far south beyond the then limits of the city. The two maps in question dated to 1864, one by the U.S. Army and the other by C.S.A. Engineers, but neither illustrated buildings within the survey area proper.

In fact, the only maps located which identified structures within the project ROW were 1940s and '50s USGS and U.S. Army Corps of Engineers 15-minute quadrangle maps. A copy of the relevant portion of the 1941 Bartlett, Tennessee, 15-minute

quadrangle is shown in Figure 4-1. The lone "house" within the ROW is highlighted. As can be seen by Figure 4-2, which illustrates the western part of the survey area on the 1939 Memphis, Tennessee-Arkansas, 15-minute quadrangle, there are no structures within the ROW.

The 1955 Memphis, Tennessee-Arkansas, 15-minute quadrangle shows one additional structure within the present ROW and two just outside the ROW. Since these structures do not appear on the earlier 1930s or '40s maps, it must be assumed that they were of relatively recent construction.

This is all rather academic, however, as none of these later structures, nor the earlier house, could be relocated during the present survey. Two of the buildings were removed by the I-55/U.S. 51 interchange, while the other two were covered with recent fill.

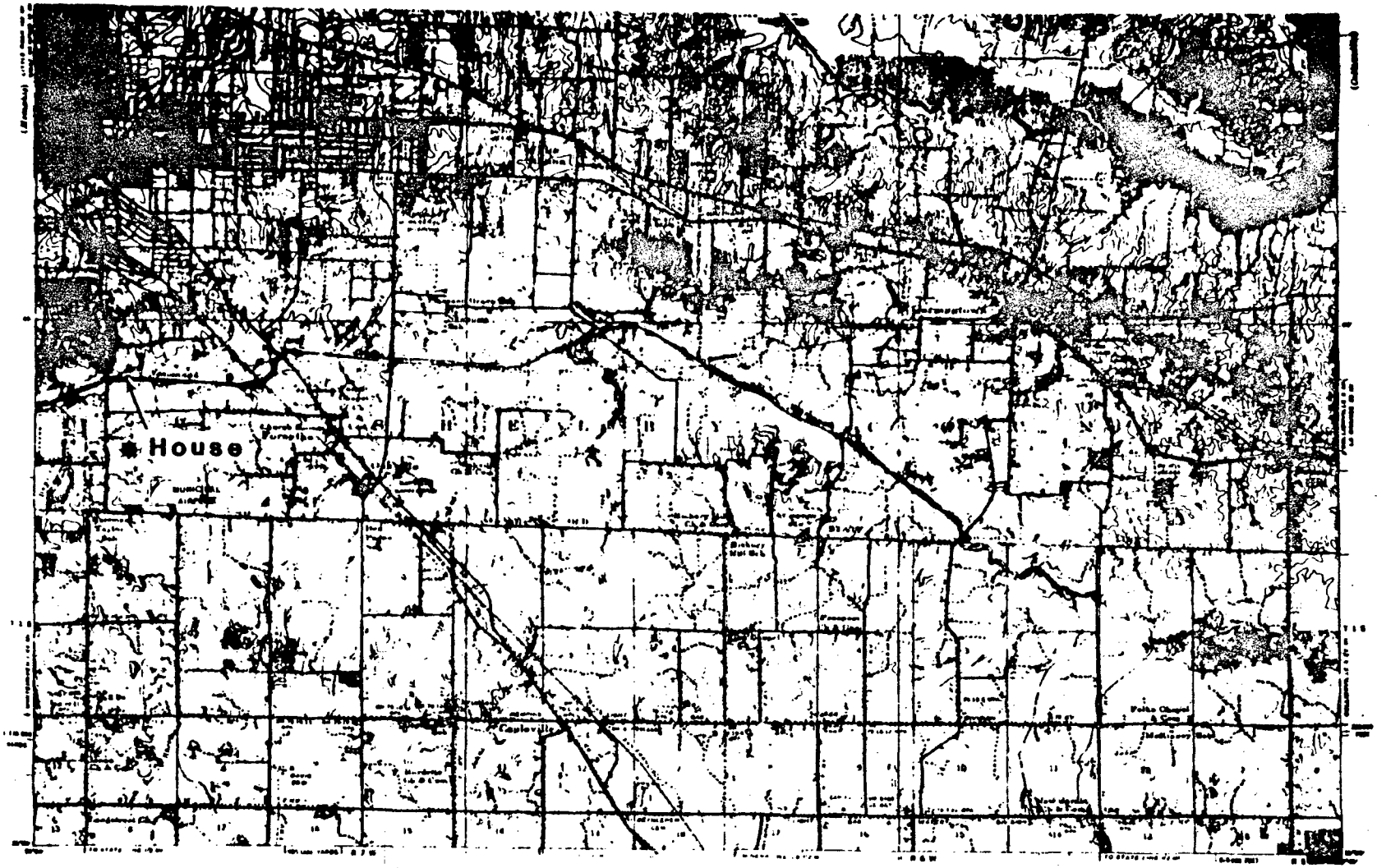

Figure 4-1. Southern portion of the 1941 Bartlett, Tenn., 15-minute quadrangle map showing the one probable house location within the project ROW (after U.S. Army Corps of Engineers 1941).

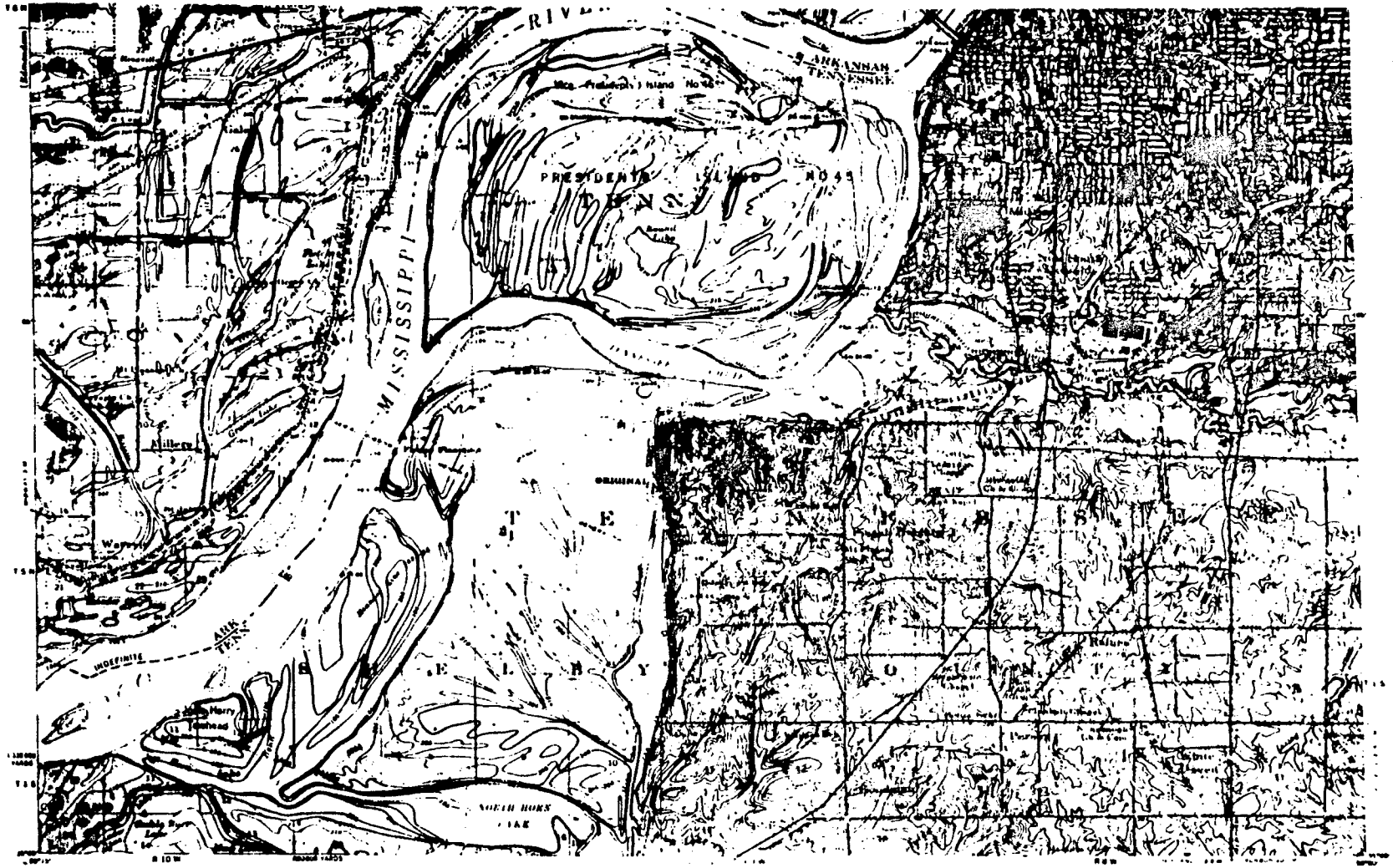

Figure 4-2. Southern portion of the 1939 Memphis, Tenn.-Ark., 15-minute quadrangle map showing a lack of structures within the project ROW (after U.S. Army Corps of Engineers 1939).

CHAPTER 5: SURVEY REQUIREMENTS, METHODOLOGY, AND RESULTS

This chapter will present data pertinent to the actual survey of the Nonconnah Creek project area. Included are discussions on the project right-of-way (ROW), the actual methodology employed while in the field, and results of the survey.

Survey Requirements

The Nonconnah Creek channel-improvement project consists of two distinct improvement plans, each requiring a different ROW. From the mouth of the creek at Lake McKellar upstream to the confluence of Johns Creek (miles 0.0 to 11.94), the creek channel will be enlarged and cleared of debris. This will require a ROW of 200 ft along each side of the creek, extending outward from the creek's top bank (Figure 5-1). From Johns Creek to the end of the project (miles 11.94 to 18.2), only channel clearing will occur, thus necessitating a reduced ROW extending only 100 ft either side of the creek's top bank.

Three sample sections of the ROW had been surveyed previously by Gilbert Commonwealth Associates, Inc., and were eliminated from the present investigation. These areas totaled 2.8 mi in length and included those portions between miles 0.5 and 2.0, 10.1 and 11.0, and 15.9 and 16.3 (see Figure 5-1). Thus, 15.4 mi of the creek were to be surveyed, 9.54 mi of which consisted of a 200-ft-wide ROW, while 5.86 mi included a 100-ft-wide ROW. It should be noted that the previous survey failed to locate any cultural resources within the three segments examined (Gilbert Commonwealth Associated, Inc. 1981).

Specific requirements concerning the actual fieldwork were typical of most cultural resources surveys. An intensive, on-the-ground search of the ROW was to be conducted, utilizing subsurface testing in areas of poor ground visibility. In this instance, the Corps of Engineers specified that such sub-surface testing would be in the form of 30-by-30-cm diameter shovel holes, at least 50 cm deep, and spaced no more than 30 m apart. Fill from each shovel hole was to be screened through a maximum of 1/4-in wire mesh hardware cloth. As will be seen, shovel tests were not as numerous as originally planned, since much of the ROW had been badly disturbed by recent filling and borrow pits.

If cultural remains greater than 50 years old were located, then their horizontal limits were to be defined, and a systematic sample of associated artifacts collected. No National Register testing was to be performed, but a testing program was to be designed for future implementation at specific sites if deemed necessary. Since no cultural resources definitely meeting the 50-year requirement were found during the survey, however, this aspect of the study was not carried out.

Survey Methodology

The survey of the project area was conducted either by one or two 2-man crews, depending upon the availability of personnel. Each crew was comprised of one Co-Principal Investigator (either Weinstein or Smith), and one field assistant.

Because the vast majority of the ROW had been highly disturbed by relatively recent land fills and borrow pits (see Figure 5-1), it was decided that the most efficient method of survey, providing the greatest possible extent of visible ground, was a complete inspection of the creek's exposed banks. Coupled with the bank inspection,

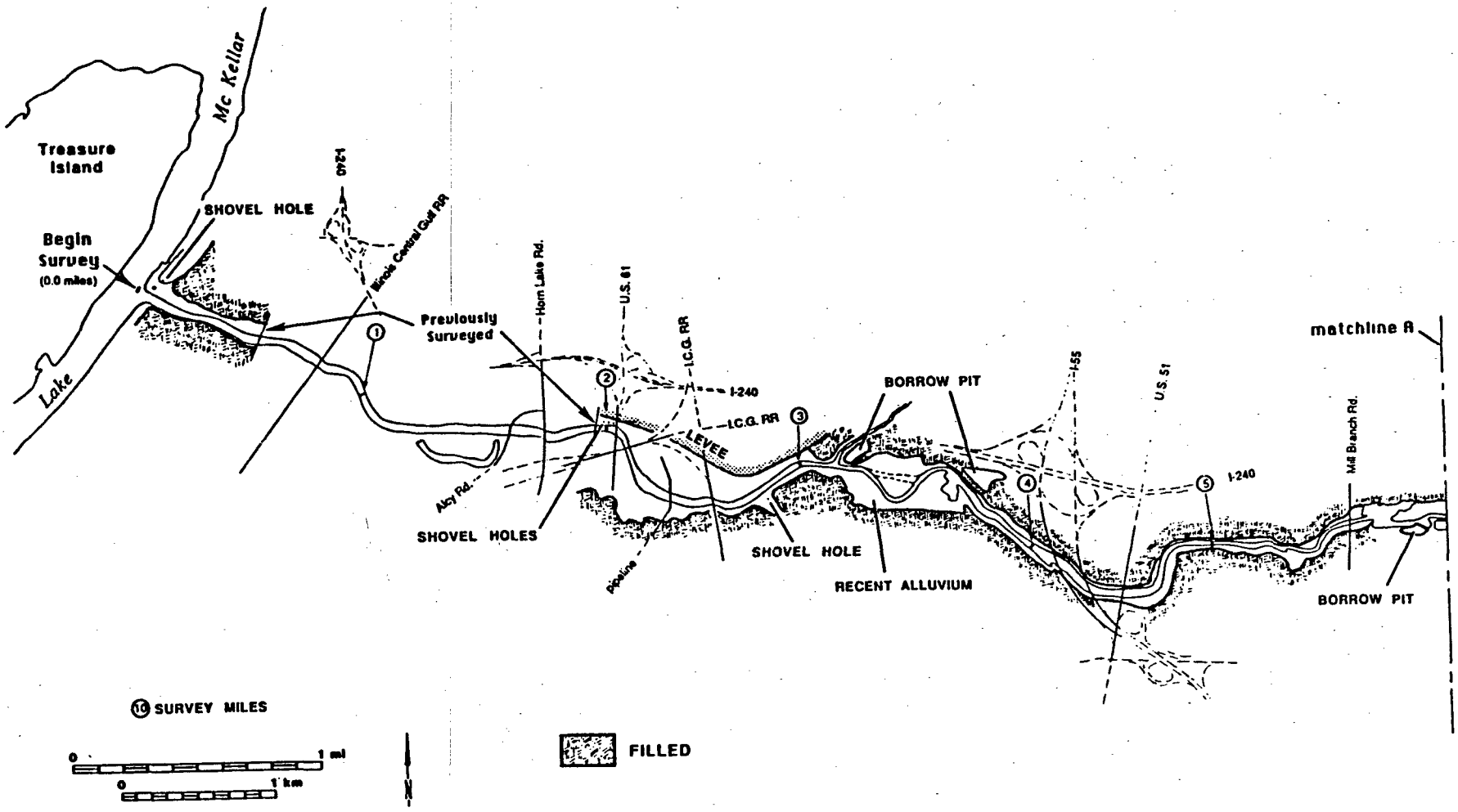

Figure 5-1. The Nonconnah Creek survey area, showing recent modifications within the floodplain, portions previously surveyed, and shovel hole locations.

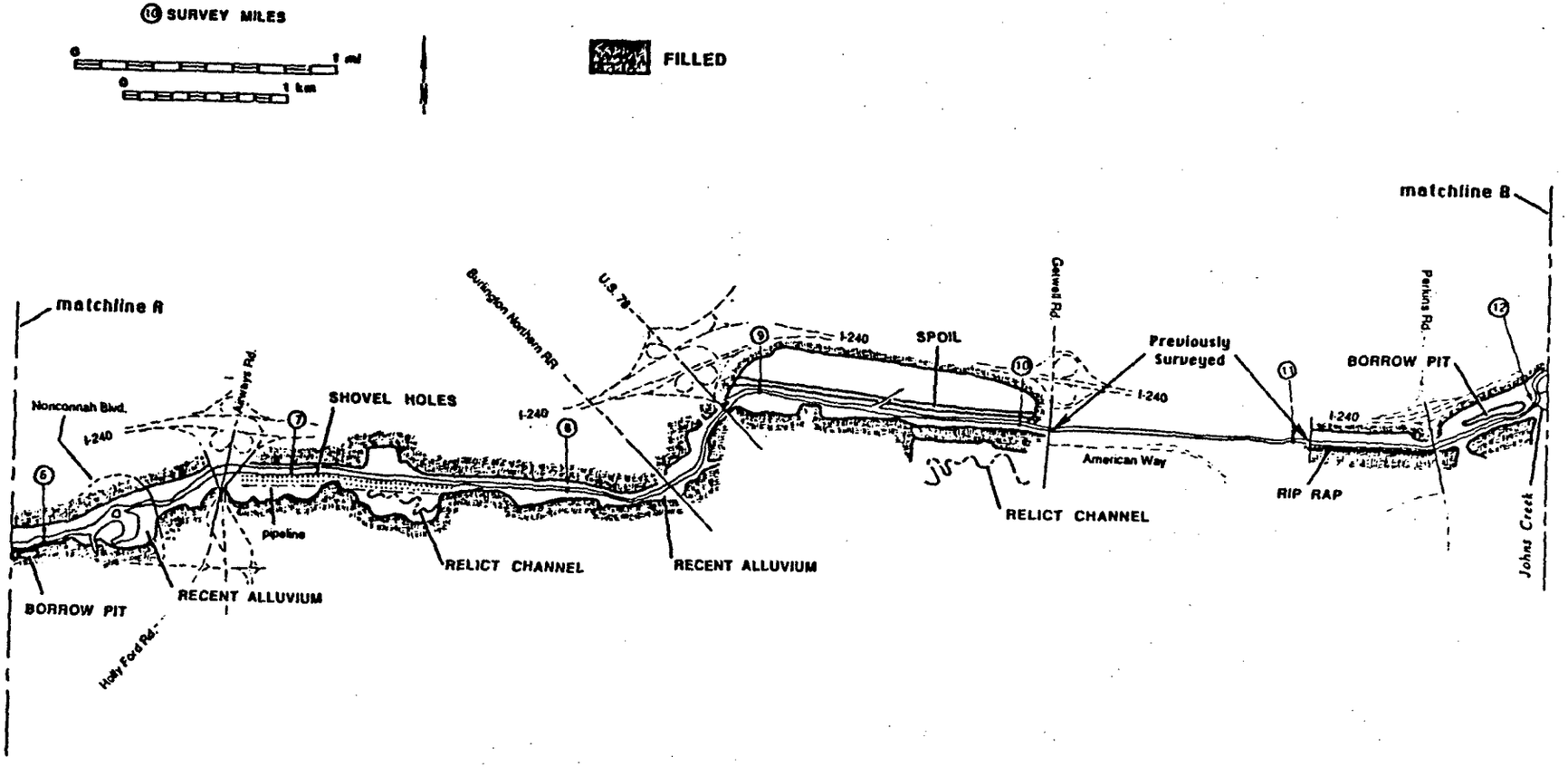

Figure 5-1. Continued.

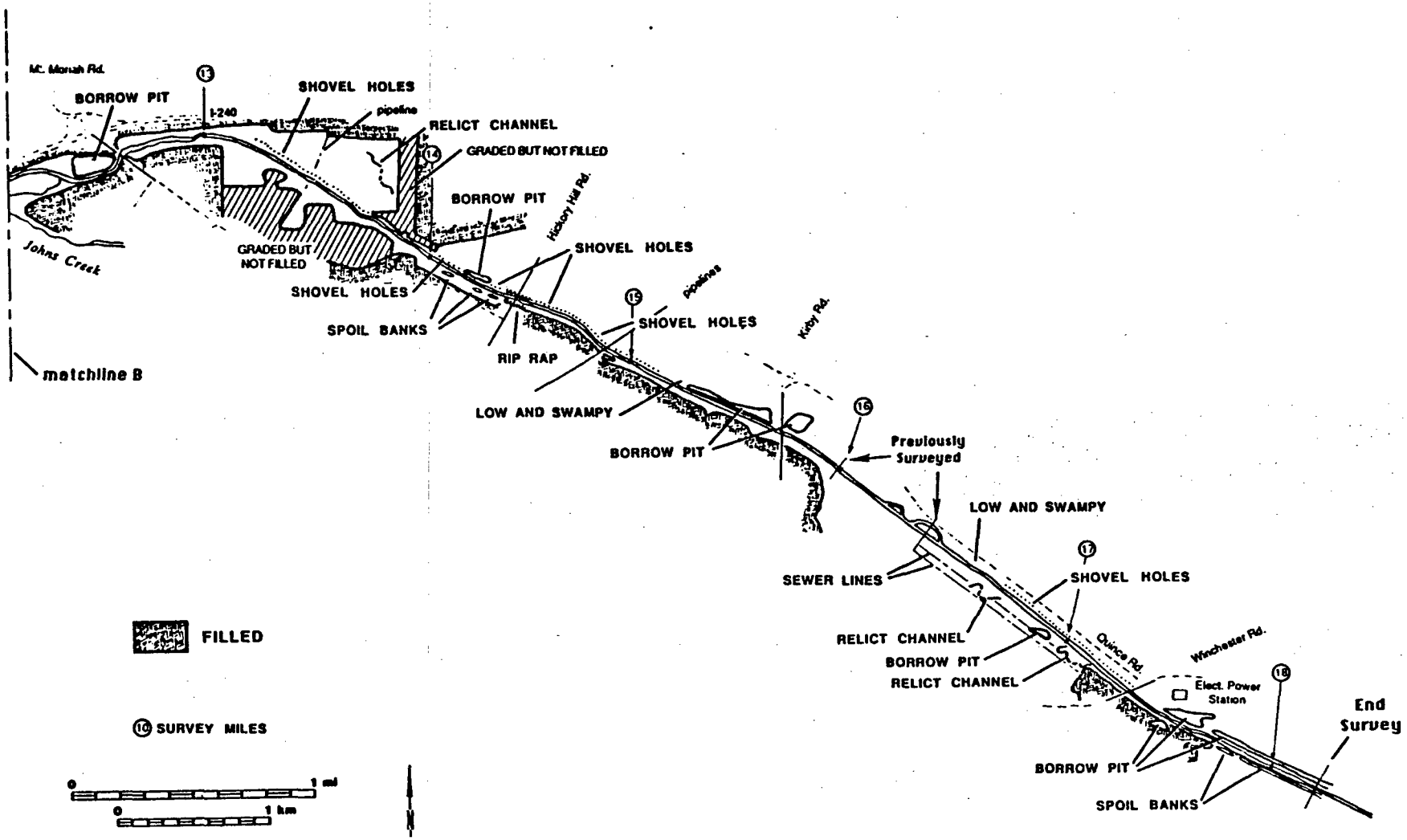

Figure 5-1. Concluded.

the survey teams carefully recorded those few segments of intact floodplain still remaining within the ROW. These included areas along the south bank from approximately miles 6.9 to 7.7, and on the north bank from miles 13.3 to 13.7, 14.0 to 15.2, and 16.3 to 17.2 (see Figure 5-1). A systematic program of shovel testing was then carried out in each of these locations. In the one area along the south bank, where the ROW was 200 ft wide, two lines of holes were dug at distances of 30 and 60 m from the creek, running parallel to the creek, with holes spaced every 30 m along each line. In all other areas, where the ROW was only 100 ft wide, a single line of shovel holes was placed parallel to the creek, again with holes spaced 30 m apart. Each hole was approximately 40 cm on a side and at least 50 cm deep. All material from each hole was screened through 1/4-in wire mesh. The location of each hole is illustrated in Figure 5-1.

Survey Results

Due in large part to the fact that most of the ROW consisted of badly disturbed and/or filled areas, it is not surprising that no prehistoric archaeological sites were found during the survey. Even in cases where known sites had been reported adjacent to the ROW, such as 40 SY 25, 32, 34, 40, 41, 55, and 90, none of these could be relocated. Most had been destroyed by highway construction, industrial or office development, or had been covered with many meters of fill. Also gone was the location of the Nonconnah Creek mastodon (Brister et al. 1981), the area now covered by riprap along the creek bank adjacent to the Mall of Memphis.

The only cultural location found, in fact, consisted of a set of pier or wharf pilings situated along the north bank of the creek at its junction with Lake McKellar (Figures 5-2 and 5-3). Based on interviews with employees of the oil refinery located immediately north of the locale, the pilings were in place prior to construction of the refinery in the 1940s, and they may represent the remains of a dock for an old dredge company. Unfortunately, it was not possible to determine whether the pilings were over 50 years of age, and, thus, whether they should be accorded site status. Regardless, it is almost certain that the pilings would not require additional testing to determine National Register eligibility. They are in a poor state of preservation and do not appear to possess any unique attribute which would allow for their significance at any level.

Neither of the two buildings (or their remains) shown on the 1941 and 1955 quadrangle maps, and discussed earlier in Chapter 3, could be relocated. Both locations had been heavily disturbed by highway construction and fill.

Perhaps the one finding of note recorded during the survey was the identification of an extensive, buried deposit of extremely well-preserved organic remains eroding out of the creek's banks along almost the entire length of the project (Figure 5-4). This deposit varies in thickness from a few centimeters to a meter or more in places; usually occurs above coarse deposits of sand and gravel but beneath several meters of alluvial fill; and is composed of leaves, twigs, branches, and, at times, entire logs. Hickory nuts, acorns, and gum balls were present in several locations. Portions of the deposit (or possibly all of it) are almost certainly equivalent to the well-preserved organics reported from the Nonconnah Creek Mastodon locale (Brister et al. 1981:3-5), and which yielded dates of between about 23,000 and 9,000 years B.P. (Brister et al. 1981:Table 1). Although not necessarily significant as a cultural resource (unless, of course, Paleoindian remains are found associated), these organic deposits can provide a wealth of data on the late Pleistocene and the early Holocene environments

of the region, possibly contributing new climatic and biological information not present at the mastodon locale.

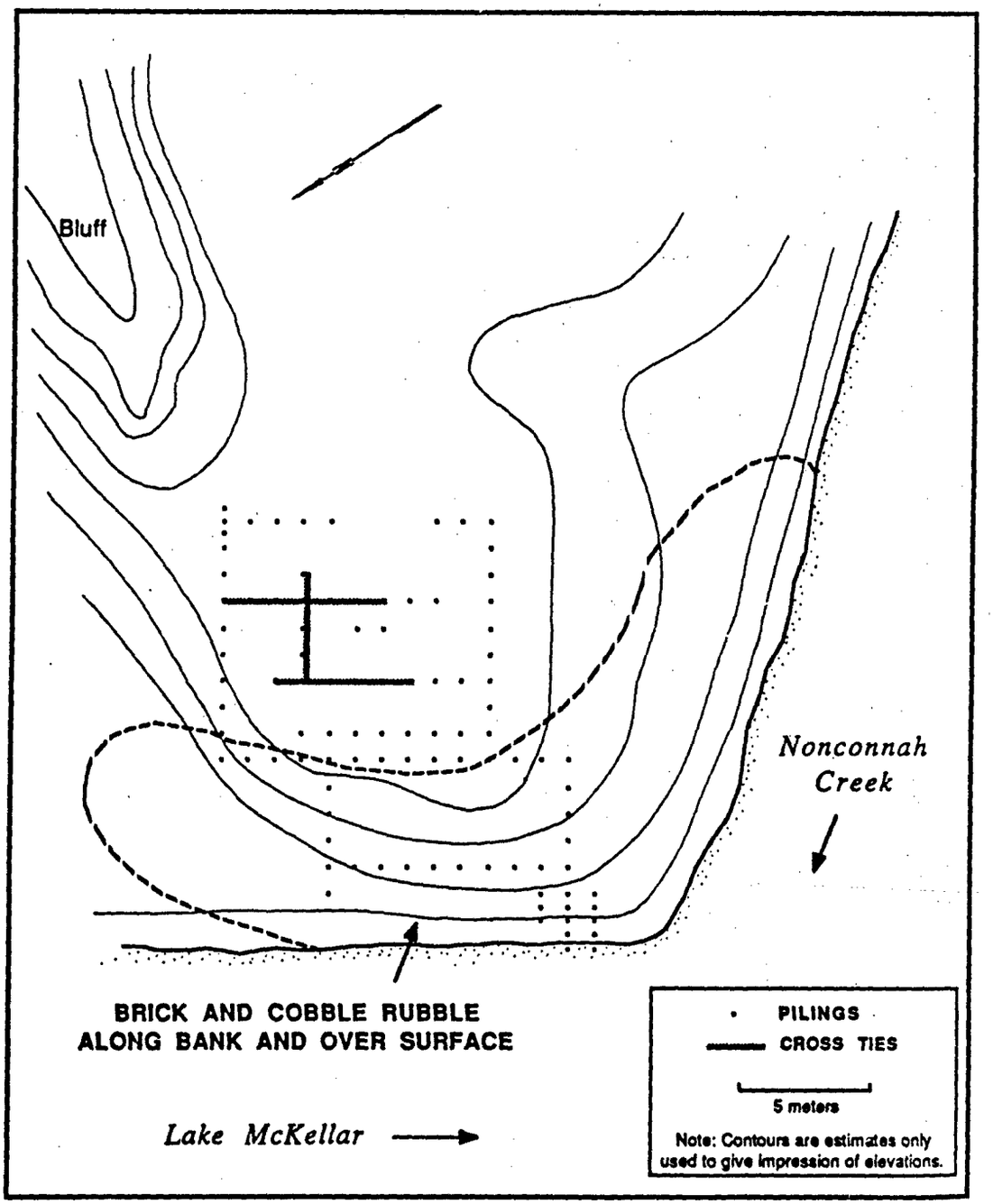

Figure 5-2. Sketch map of the pier or wharf pilings at the mouth of the Nonconnah Creek.

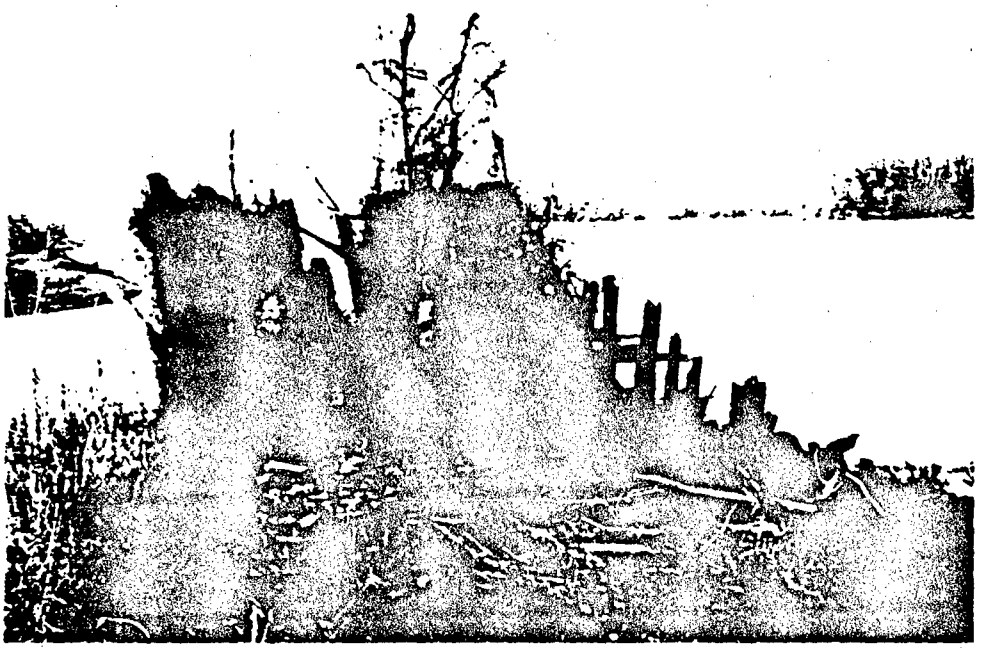

Figure 5-3. Overgrown set of pilings at the mouth of Nonconnah Creek. View to the southwest. Date: 1/6/87.

Figure 5-4. Nonconnah Creek at about mile 9.5, showing deposit of well-preserved organic remains (arrow) eroding out of the bank. View to the west. Date: 1/10/87.

CHAPTER 6: SYNTHESIS OF CULTURAL DATA WITHIN THE NONCONNAH CREEK DRAINAGE

Cultural Period Syntheses

The synthesis of extant data provided here necessarily deals only with diagnostic artifacts from each period. Nearly all the sites involved are clearly multicomponent, while the remainder are suspect due to the intensive collecting activity carried out in the drainage prior to much of the archaeological survey work. Of major importance for this report is the availability of most of the original material from the 1955-1957 survey work, which was recently redonated to Chucalissa after a 25-year absence. The typology used here will follow that used in the Forked Deer-Obion survey (Smith 1979c), except as noted.

Paleoindian Period

There is only one component from this period recorded from the basin. This was at 40 SY 7, a ridgetop site which also had components from most other cultural periods. The Paleo component is represented by a single Clovis point which was rather broad, with convex lateral edges and a single fluting flake removal from each face. It was sold by its owner soon after the site and specimen were recorded. The site was in pasture from before 1968 until about two years ago, when it was incorporated into a subdivision, and no further material was ever obtained from it.

Early Archaic Period

Early Archaic components are frequent in the drainage (Figure 6-1), but very few are marked by any one point type. Dalton and Greenbrier points, often grouped with Paleoindian or a nebulous "Transitional" period, are here included with the Early Archaic. It should be noted, however, that there is good evidence to suggest that Dalton and Dalton-like points occurred in the early Early Archaic, and were not contemporaneous with later Early Archaic side-notched types such as Big Sandy (Goodyear 1982). As noted, it is believed that Dalton and related points were in use from approximately 8,500 to 7,900 B.C. (Goodyear 1982:389), while the Early Archaic corner-notched types were in use from about 7,900 B.C. until 5,500 B.C.

Because of the reliance placed upon point types as markers of specific periods, the following discussion for the Archaic periods will revolve around specific, diagnostic points.

Dalton (Cambron and Hulse 1964)
(Figure 6-2, A)

Dalton components are present at 40 SY 29 and 40 SY 90. A single specimen was found at each site. Both are of the small lanceolate form with shallow hafting constrictions common to southwestern Tennessee. Both sites appear to have been on terrace remnants protruding into the modern floodplain.

Greenbrier (Cambron and Hulse 1964)
(Figure 6-2, B)

Components characterized by Greenbrier points are at 40 SY 7 and 40 SY 45. Both are on multicomponent sites on high ridges overlooking the creek bottoms from the south. One specimen was recovered from 40 SY 7 and two from 40 SY 45.

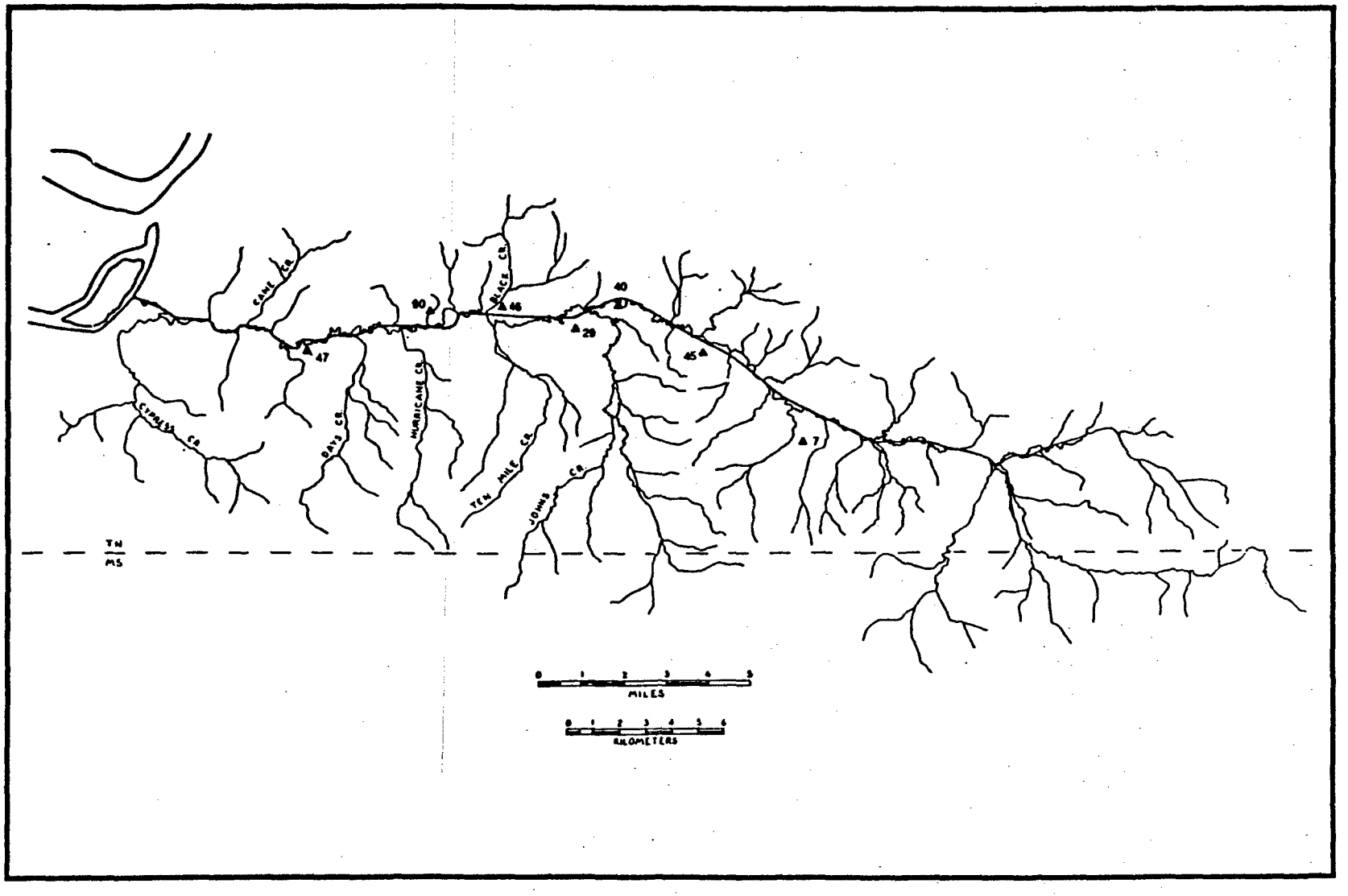

Figure 6-1. Sites with Early Archaic components within the Nonconnah Creek drainage.

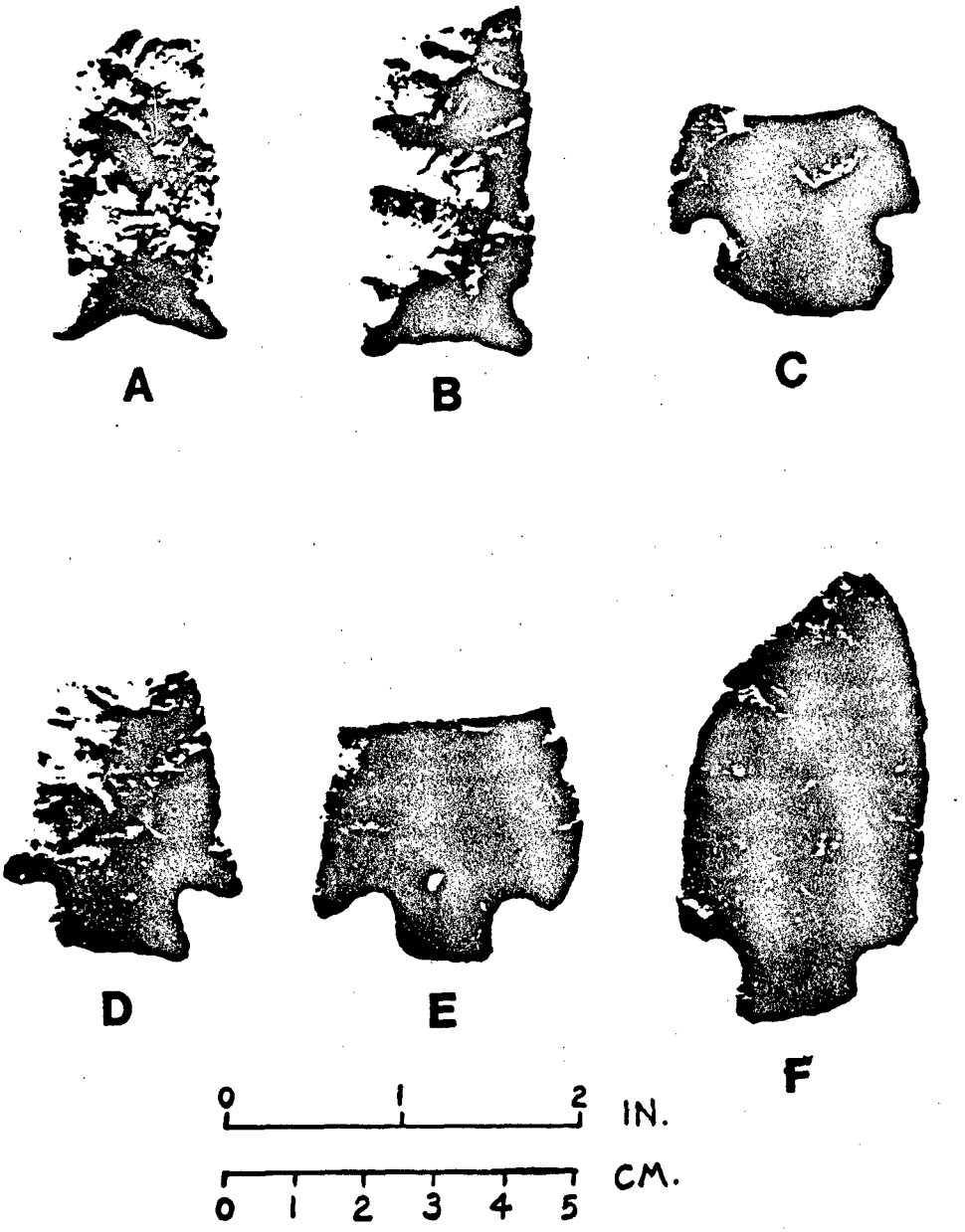

Figure 6-2. Early and Middle Archaic point types. (A) Dalton (40 SY 90/4), (B) Greenbrier (40 SY 7/5), (C) Plevna (40 SY 40/60), (D) Cypress Creek (40 SY 47/10), (E) McIntire (40 SY 40/57), (F) Bartlett (40 SY 40/41).

Big Sandy (Cambron and Hulse 1964)

A single Big Sandy point was recovered from 40 SY 40. This specimen has the deep concave base typical of Big Sandy points, with its notches parallel to the basal edges, rather than the contrasting details of several similar Early and Middle Archaic types.

Haywood (Smith 1979)

A single Haywood specimen was found at 40 SY 40. The Haywood type seems most closely related to such late Early Archaic types as Cache River, and Kessel Side-Notched. Its distribution is primarily to the north and northeast into the western Tennessee River valley and possibly beyond into north-central Tennessee and Kentucky.

Palmer (Coe 1964)

Specimens within the range of Palmer Corner-notched were found at 40 SY 7 and 40 SY 40. As noted, 40 SY 7 is on a high ridge overlooking the creek bottoms, while 40 SY 40 is on a low terrace near the mouth of Johns Creek. Both are multicomponent sites containing artifacts representing almost every time period of prehistory. This type is often combined with Kirk Corner-Notched as a small variant; it tends to be earlier than other variants in North Carolina (Coe 1964) and eastern Tennessee (Chapman 1975) where both have been found in good stratigraphic context.

Plevna (DeJarnette et al. 1962)
(Figure 6-2, C)

One specimen of this corner-notched type was found at 40 SY 40. This is another of the Kirk-related types found through most of the United States east of the Mississippi River. Plevna points are particularly well known from Illinois and the Tennessee River valley.

Lost Lake (Cambron and Hulse 1964)

Lost Lake specimens were found at 40 SY 40, 40 SY 45, 40 SY 46, and 40 SY 47. Three of the sites are on low terraces along the creek, while 40 SY 45 is on the end of a high ridge spur extending into the floodplain. This type is also widely distributed through the central United States. At the Hester (Brookes 1979) and Stanfield-Worley (DeJarnette et al. 1962) sites, Lost Lake points were found to be later than Plevna's.

Middle Archaic Period

The various probable Middle Archaic point types are of unknown relative ages within the period. Distributions of several of the various types are quite different, with apparent boundary zones in or near the Nonconnah Creek drainage (Figure 6-3). While such ground-stone items as atlatl weights and grooved axes have been found in association with Middle Archaic points in other areas, there is no data to clarify the situation in the Nonconnah Creek drainage.

Cypress Creek (Lewis and Lewis 1961)
(Figure 6-2, D)

The specimens termed Cypress Creek in this report and in Smith (1979) correspond essentially to Cypress Creek II as defined in Lewis and Lewis (1961:37, 40, Pl. 9 g-l) and stratigraphically found primarily between the Eva and Benton types at the Eva site. Single specimens were found at 40 SY 7, 40 SY 38, and 40 SY 47. Environmental settings represented include the top of a ridge overlooking the main creek floodplain (40 SY 7), the floodplain or a low terrace edge along a side creek (40 SY 38), and a low terrace along the main creek (40 SY 47).

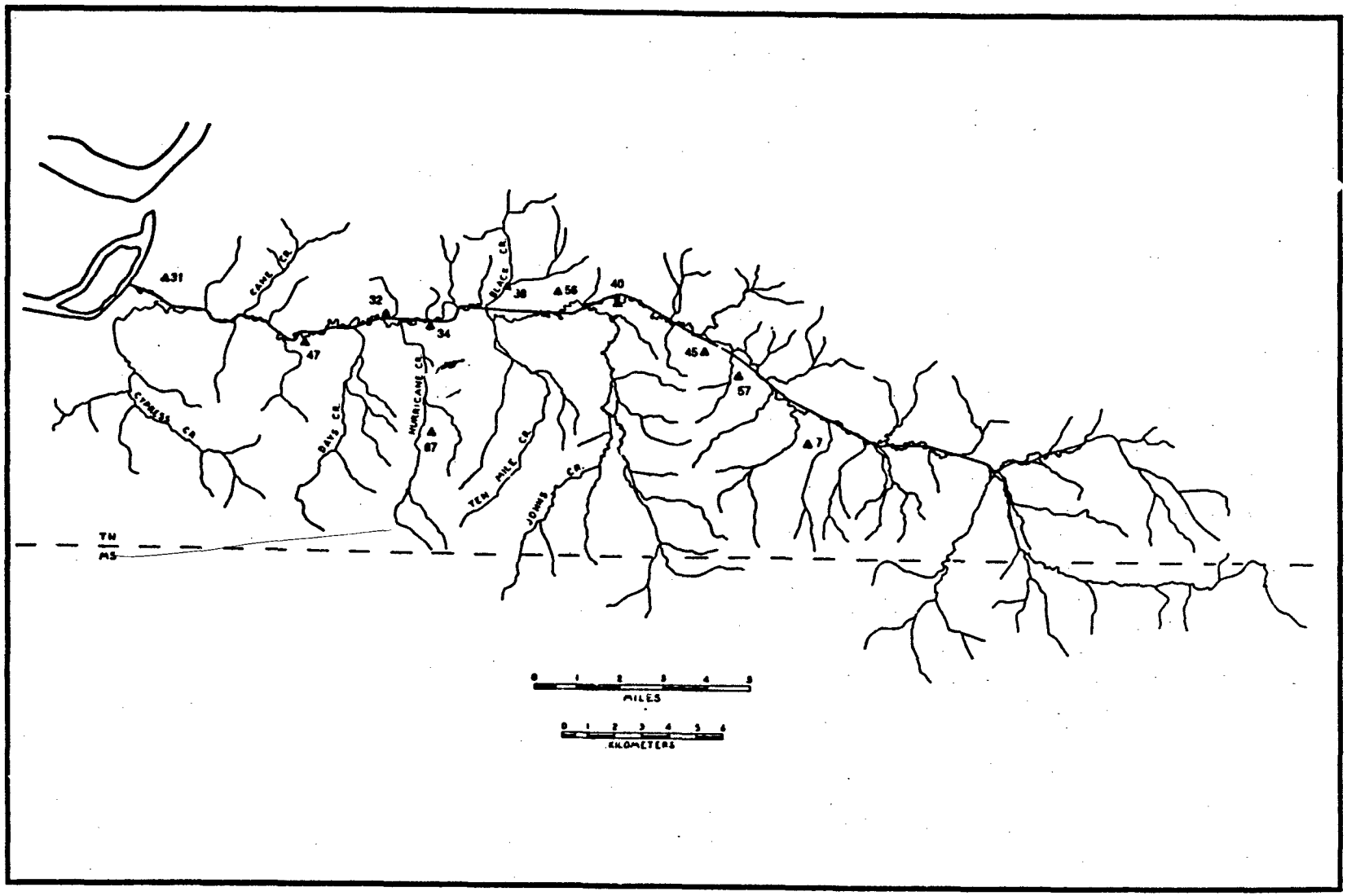

Figure 6-3. **Sites with Middle Archaic components within the Nonconnah Creek Drainage.**

Nonconnah (Smith 1979)

Nonconnah points were found at several sites in the drainage: 40 SY 31 (1 specimen), 40 SY 32 (2), 40 SY 34 (1), and 40 SY 45 (2). All except 40 SY 45 are on low terraces along Nonconnah Creek; 40 SY 45 is on a high ridge spur overlooking the floodplain.

McIntire (Cambron and Hulse 1964)
(Figure 6-2, E)

This type, formerly listed as Form 6A and B, is included in the Middle Archaic grouping in the Tennessee River valley where it is more commonly reported. Specimens have been found westward across western Tennessee and northern Mississippi to a zone a few miles east of the Mississippi River bluffs where its distribution is complementary to that of the Bartlett type. The Nonconnah Creek drainage specimens were found at 40 SY 38 (1), 40 SY 40 (1), 40 SY 45 (3), 40 SY 56 (2) and 40 SY 57 (2). Site 40 SY 38 is on the edge of a side creek floodplain, 40 SY 45 is on the end of a high ridge overlooking the Nonconnah Creek floodplain, and the rest are on low terraces along the main creek valley.

Bartlett (Smith 1979)
(Figure 6-2, F)

Bartlett points form the western part of the McIntire-Bartlett complement. They appear to represent a tradition based in the Mississippi River alluvial valley, but their distribution outside western Tennessee is poorly known. The type is represented in the Nonconnah Creek drainage at 40 SY 32 (2), 40 SY 34 (2), 40 SY 40 (3), and 40 SY 87 (1), all in the western end of the area. Sites 40 SY 32 and 40 SY 34 are on low terraces along the main creek, while 40 SY 87 is on a low ridge overlooking the Hurricane Creek valley about 2 mi south of Nonconnah Creek.

Late Archaic Period

The Late Archaic period is particularly noted for a subsistence emphasis on seasonally concentrated food sources, the beginnings of systematic long-range trade in exotic raw materials and for objects made from them, the beginnings of use of domesticated food plants, and possibly the beginning of tribal-level social systems. The classic Late Archaic cultures of the Midsouth are those of the Tennessee River valley in western Tennessee and northern Alabama. They are characterized by a variety of large stemmed points, ground stone tools and ornaments, and bone and antler tools and ornaments. Most excavated sites are large multicomponent shell middens in the Tennessee River reservoirs. Eight sites with Late Archaic point types are noted along the central portion of the Nonconnah Creek drainage (Figure 6-4).

Benton (Lewis and Lewis 1961; Cambron and Hulse 1964; Smith 1979)
(Figure 6-5, A and B)

Components characterized by Benton points have variously been grouped with Middle Archaic or with Late Archaic cultures, but the subsistence-settlement system and artifact complex as presently known seem sufficient to include Benton within the Tennessee River Late Archaic cultural tradition. The distribution of Benton components tends to be complementary to that of Bartlett, suggesting possible partial contemporaneity. Recent work (Smith 1979, 1982) has distinguished several varieties of Benton points and suggested a sequence for some, but there is no data from the Nonconnah Creek drainage to check chronological possibilities. Benton points are

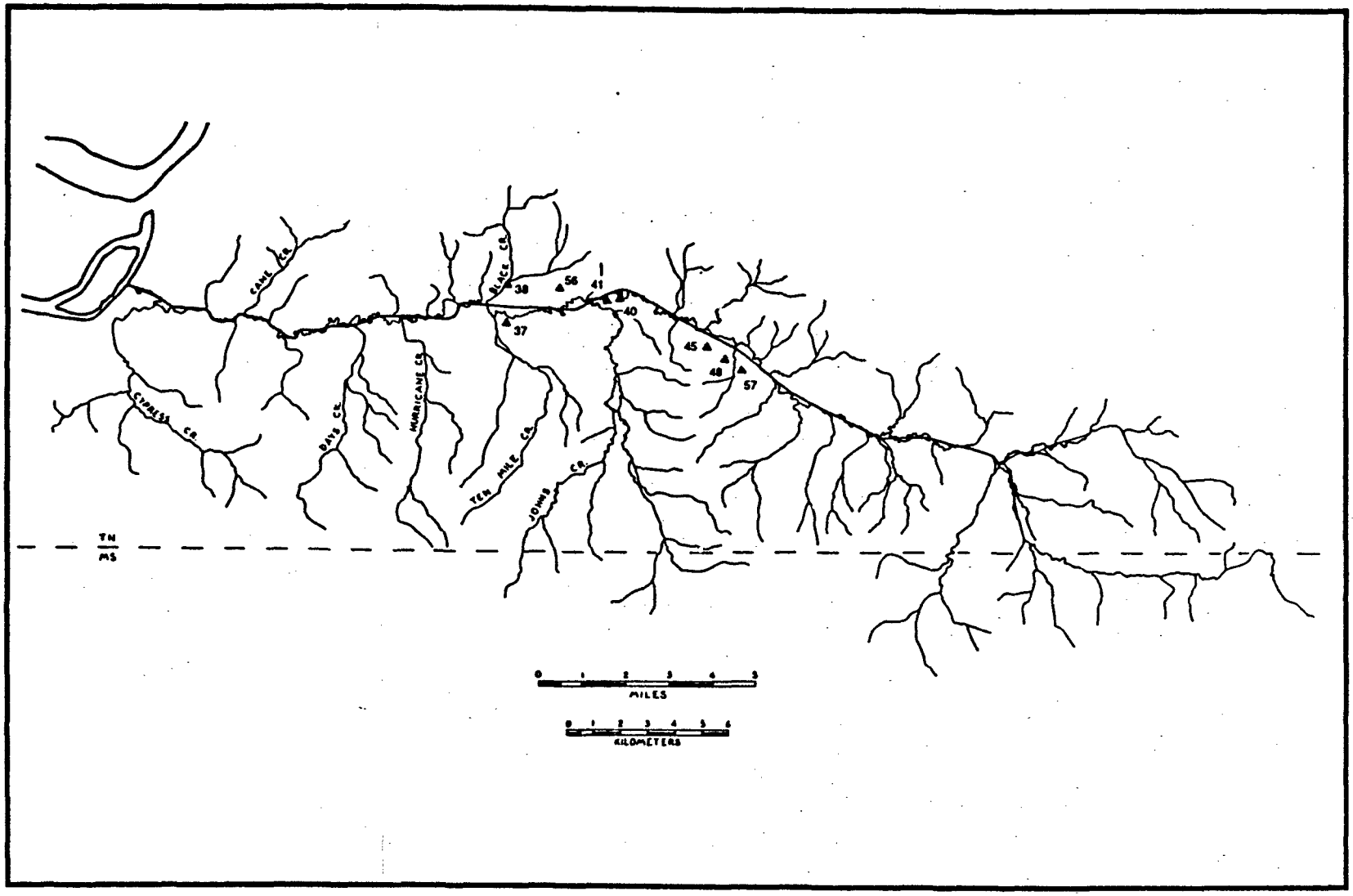

Figure 6-4. Sites with Late Archaic components within the Nonconnah Creek drainage.

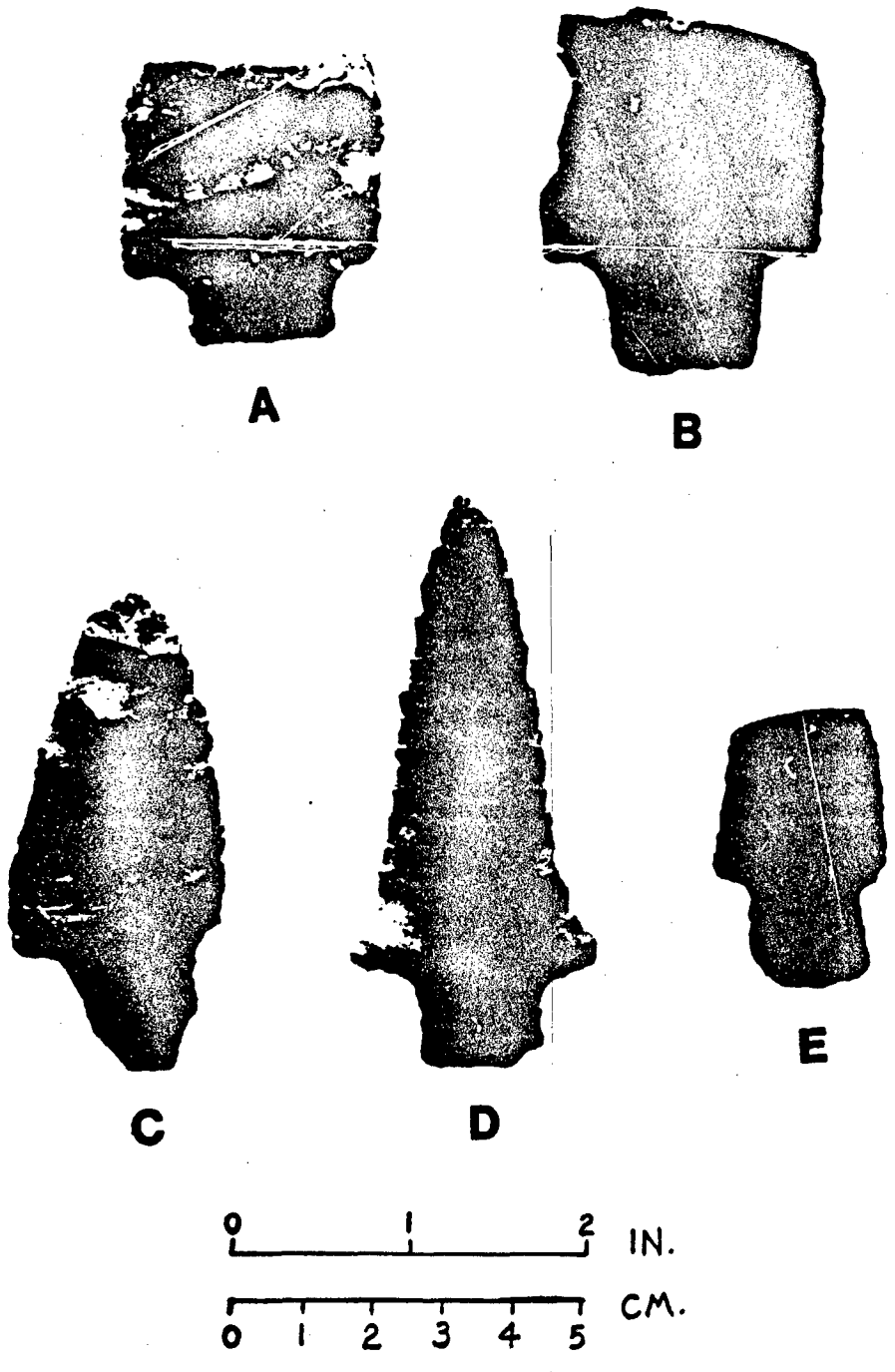

Figure 6-5. Late Archaic point types. (A) Benton, var. C (40 SY 40/30), (B) Benton, var. D (40 SY 45/24), (C) Mulberry Creek (40 SY 40/32), (D) Pickwick (40 SY 40/37), (E) Flint Creek (40 SY 37/33).

present at several sites in the drainage; they are: 40 SY 38 (2 var. I), 40 SY 40 (6 var. C), 40 SY 41 (1 var. I), 40 SY 45 (1 var. B, 5 var. C, 1 var. D), 40 SY 48 (1 var. D), 40 SY 56 (1 var. C), and 40 SY 57 (3 var. C, 1 var. D, 3 var. N). Site 40 SY 38 is on Black Creek just above its entry into the Nonconnah Creek valley, sites 40 SY 40, 40 SY 41, 40 SY 56, and 40 SY 57 are on low terraces along Nonconnah Creek, and sites 40 SY 45 and 40 SY 48 are on high ridge spurs overlooking the Nonconnah Creek valley.

Pickwick (Cambron and Hulse 1964)
(Figure 6-5, D)

The two Pickwick points from the Nonconnah Creek valley are the only ones recorded southwest of the South Fork of the Forked Deer River except for a few from the upper Hatchie River drainage in McNairy County. The type normally has a complementary distribution with early Poverty Point components marked by Pontchartrain points; its representation at 40 SY 40, which has a major, early Poverty Point component, may well be an indication of travel rather than an occupation by makers of Pickwick points. There is one example from 40 SY 38 and two from 40 SY 40.

Lick Creek (Smith 1979)

Lick Creek is another type best known from the Tennessee River valley in western Tennessee and has a complementary distribution with Poverty Point types. One specimen was found at 40 SY 57, a multicomponent site including one or more Poverty Point occupations.

Mulberry Creek (Cambron and Hulse 1964)
(Figure 6-5, C)

This type is best known from the Tennessee River valley in western Tennessee and northern Alabama, but is occasionally found in the Mississippi River drainage. It is represented in the Nonconnah Creek drainage at 40 SY 40 (3), 40 SY 45 (1), and 40 SY 56 (2). All three sites have major, early Poverty Point components marked by Pontchartrain points.

Flint Creek (Cambron and Hulse 1964; Smith 1982; McNutt and Weaver 1985)
(Figure 6-5, E)

Flint Creek is a Late Archaic/Gulf Formational type best known from the Tennessee and Tombigbee River valleys in Tennessee, northwestern Alabama, and northeastern Mississippi. One specimen each was found at 40 SY 37 and 40 SY 38, both sites with Poverty Point components.

Poverty Point Period

The Poverty Point cultural tradition has variously been considered a part of the Late Archaic, a peculiar and wonderful aberration found only at the type site and a few privileged satellites, or a cultural period in its own right. In this report Poverty Point will be treated as a distinct cultural period within the lower Mississippi River valley and adjacent areas, essentially following the chronology established by Phillips (1970) in this regard. The Poverty Point cultural complex is recognizable not only by its ubiquitous baked clay objects, but also by a distinctive series of projectile point types, and, less frequently, by items from its distinctive lapidary industry, its microblade complex, and an assortment of plummet/bolas stones. The northern frontier of this

tradition appears to have reached the upper end of the Mississippi alluvial valley in southeastern Missouri and into the Obion River valley in western Tennessee. Early components of the tradition are marked by Pontchartrain points, a type which seems to have gone out of use in the region by about 800 B.C. In western Tennessee, they are restricted to the drainages southwest of the Hatchie River and the bluff area of Lauderdale County just north of that river. Later components are marked by Arlington and Harris Island points and extend northward into the Obion River drainage, but eastward out of the loess-soils zone only in the upper portion of the South Forked Deer River drainage. Kent, Delhi, Lambert, and Motley types appear in both areas. Several provisional Poverty Point phases have been defined in western Tennessee (Smith 1979), and others are definable in other drainages to the south of the area covered in that publication.

Since most of the 39 Poverty Point components (Figure 6-6) from the Nonconnah Creek drainage are from multicomponent sites, only one phase, Nonconnah, will be discussed. Point types are listed in Table 6-1. The most common points are Pontchartrain, vars. Shelby (Figure 6-7, A) (31), and A (Figure 6-7, C) (16); Lambert, var. A (Figure 6-7, F) (55); Delhi, var. A (17); Harris Island, var. B (Figure 6-8, C) (10); and Motley, var. C (Figure 6-7, D) (10). Motley, var. C here includes some specimens which formerly were included in the Whitlock type. Other points represented are Pontchartrain, var. Teoc (Figure 6-7, B) (5); Kent (Figure 6-7, E) (5); Delhi, var. B (6); Harris Island, var. A (5); and Arlington (Figure 6-8, D) (3). The baked-clay-object complex (Table 6-2) consists of spherical plain (Figure 6-9, A) (45), biconical plain (Figure 6-9, B) (17), and cylindrical plain (Figure 6-9, C) (29), as primary types, with ellipsoidal plain (3), spherical cordmarked (1), discoidal cane punctated (Figure 6-9, D) (1), and triangular-biscuit plain (1), as minor or trade types.

Attempted correlation of projectile point and baked clay object types was relatively successful. Sites with Pontchartrain points and no Harris Islands or Arlingtons have only spherical and cylindrical baked clay objects. These sites are 40 SY 37, 40 SY 38, 40 SY 47, and 40 SY 87. Sites whose collections also include one or more of the late-marker point types include biconical plain, ellipsoidal plain, spherical cordmarked and cane punctated biscuit-shaped baked clay objects, in addition to the spherical and cylindrical plain types. These sites are 40 SY 31, 40 SY 40, 40 SY 45, and 40 SY 56. An examination of the site collections for possible Early Woodland components as a source of apparent late baked clay object forms, as often suggested throughout the Mississippi valley, suggests this was not a significant factor in the Nonconnah Creek drainage. All of the sites with "late" and with "early" components also had Early Woodland components, a frequency which should have erased the observed correlation had they been responsible for the apparent late styles of baked clay objects. Pressing the matter a bit further suggests that 40 SY 112 and 40 SY 275 are early on the basis of baked clay objects and that 40 SY 39 and 40 SY 53 are late.

Analysis of other aspects of the complex is rendered difficult by the lack of debitage samples from sites collected before 1968, by which time site destruction and stripping of diagnostic artifacts from the sites had decimated the former resource base. The few components located after 1968 include microblade cores and microblades from 40 SY 231 and 40 SY 307, as well as a utilized microblade from multicomponent 40 SY 29. Site 40 SY 231 also has a Mississippian component, and 40 SY 307 also has a Middle Woodland component. Other items potentially related to Poverty Point components are few and ambiguous. Site 40 SY 40 included two fiber-tempered sherds; the site also has components representing almost every post-Paleoindian occupation in the drainage. Site 40 SY 56 produced a polished hematite hemisphere, but has a large number of other components. Site 40 SY 90 has a fragment of a

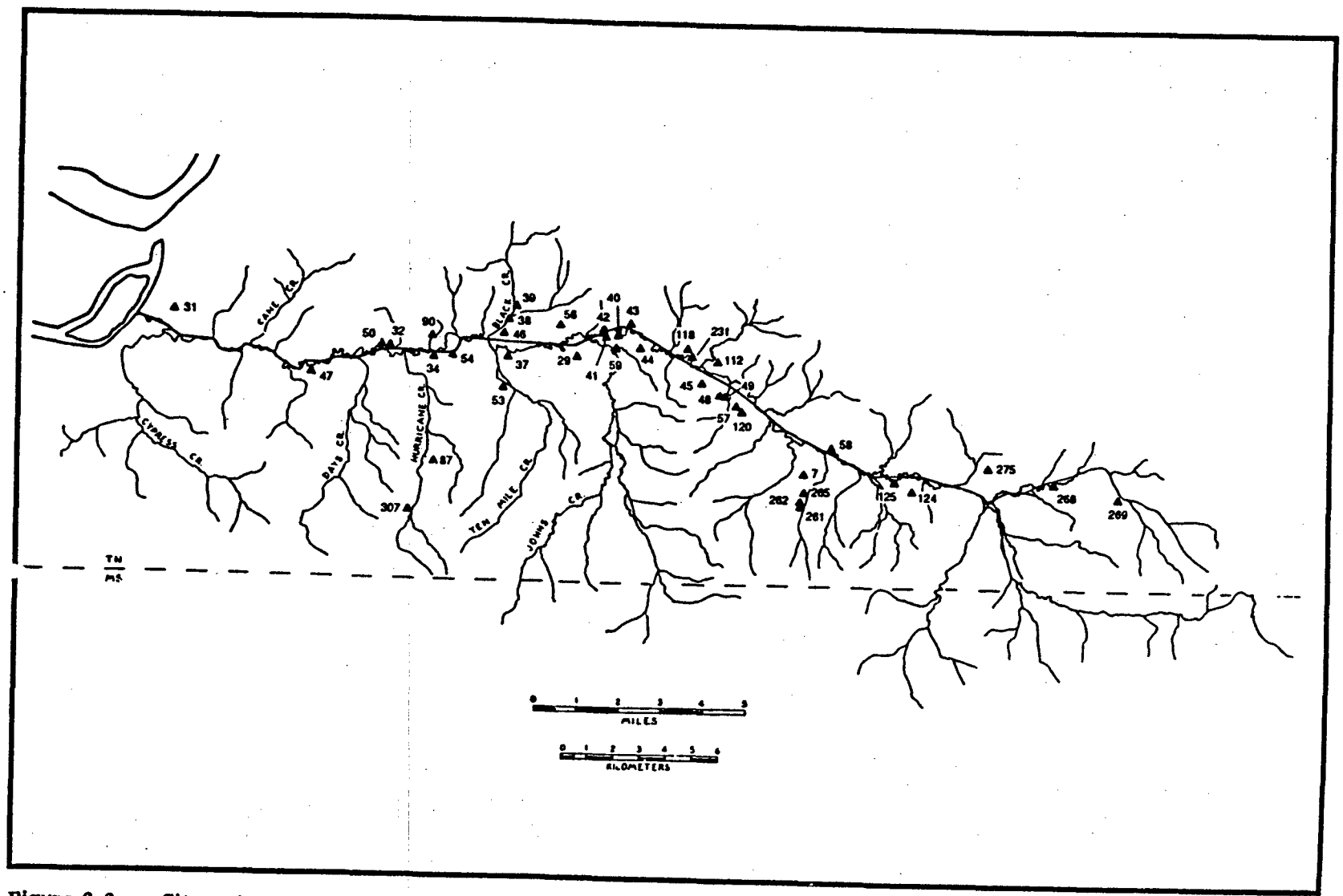

Figure 6-6. Sites with Poverty Point components within the Nonconnah Creek drainage.

Table 6-1. Poverty Point Period Point Type Distribution.

Type:	Pontchartrain				Motley	Kent	Lambert		Delhi		Harris Is.		Arlington
Variety:	Shelby	Teoc	A	B			A	B	A	B	A	B	
Site													
40 SY 7	1		2				2					1	
40 SY 29		1											
40 SY 31	1											1	
40 SY 32						2	1				2		
40 SY 34			1				1						
40 SY 37	2			1	1	1	3						
40 SY 38	1									2			
40 SY 40	7	3	6		3		17				2	2	
40 SY 41							4						
40 SY 43	1						1		1				
40 SY 44							1						
40 SY 45	1		3		1	2	2		5			2	2
40 SY 46							1						
40 SY 47	5				2		2		3				
40 SY 48							2		1				
40 SY 49					1		2						
40 SY 50									1				
40 SY 56	7	1			2		3		6		1	2	
40 SY 57	3		3				4			3		1	1
40 SY 58							1					1	
40 SY 59									1				
40 SY 87	1												
40 SY 90	1												
40 SY 120			1										
40 SY 124							1						
40 SY 231							1						
40 SY 288							1						
40 SY 289							1						
40 SY 307							4						
Totals	31	5	16	1	10	5	55	0	17	6	5	10	3

prismatic atlatl weight of ferruginous siltstone; other components present are Dalton, Early Woodland, and Middle Woodland, all unlikely candidates for the weight.

Poverty Point settlement patterns in the drainage are only dimly visible via current data. Most of the sites are multicomponent and most of them were destroyed before collections including debitage were made. Most of the areas involved were filled or bulldozed before soil mapping was done, thus obscuring the premodern soils configuration before it could be recorded. A rough summary is possible, however, by listing the sites represented along with their topographic settings and numbers of projectile points and baked clay objects recorded (Table 6-3).

Sites which appear to have had particularly important components include 40 SY 40, 40 SY 45, 40 SY 47, 40 SY 56, 40 SY 57, and 40 SY 87. All, except 40 SY 45 and 40 SY 87, are on low terraces in the main valley; 40 SY 45 is on a high ridge spur

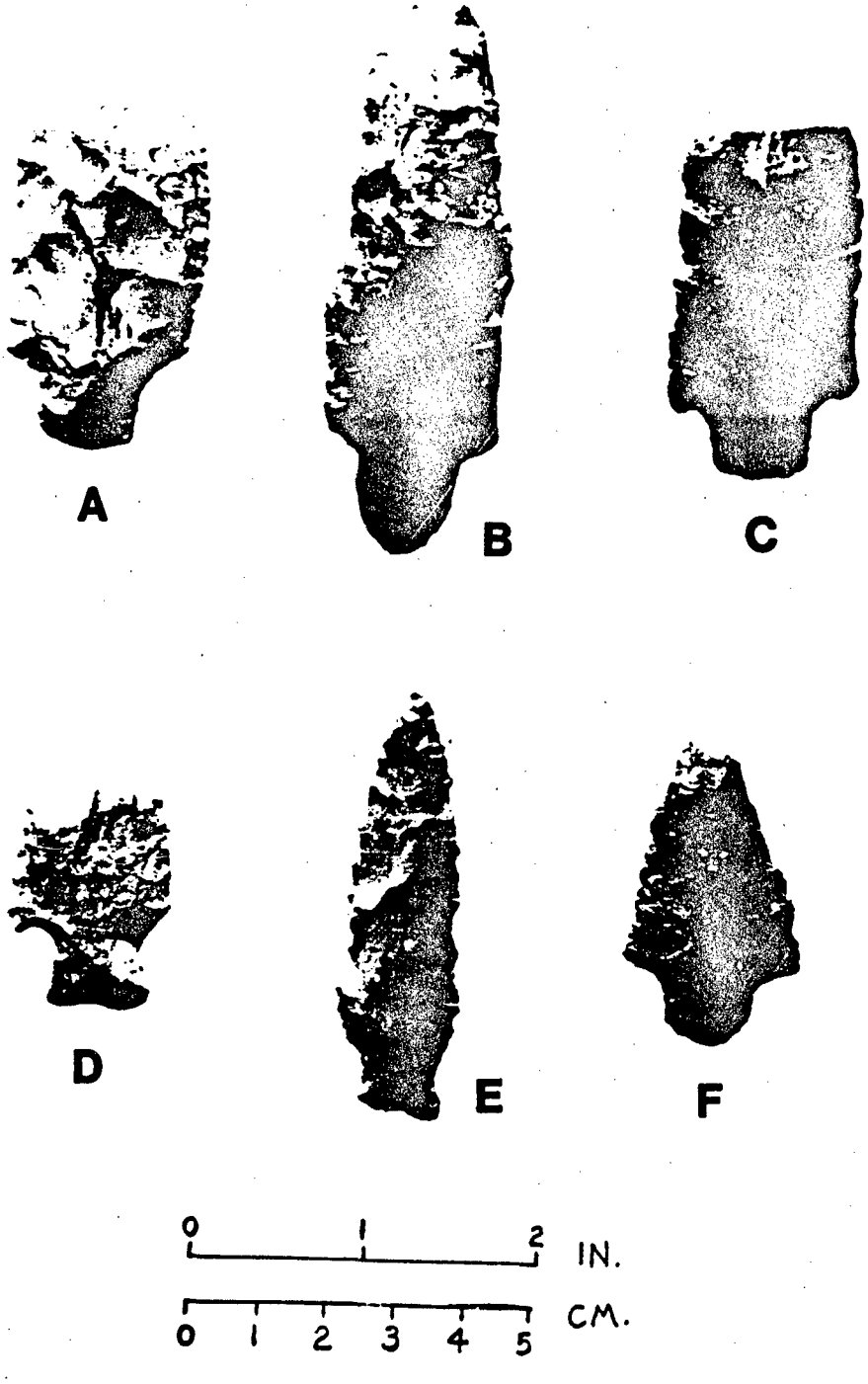

Figure 6-7. Poverty Point Period point types. (A) Pontchartrain, var. Shelby (40 SY 40/35); (B) Pontchartrain, var. Teoc (40 SY 40/28); (C) Pontchartrain, var. A (40 SY 40/33); (D) Motley, var. C (40 SY 45/118); (E) Kent (40 SY 32/28); (F) Lambert, var. A (40 SY 40/61).

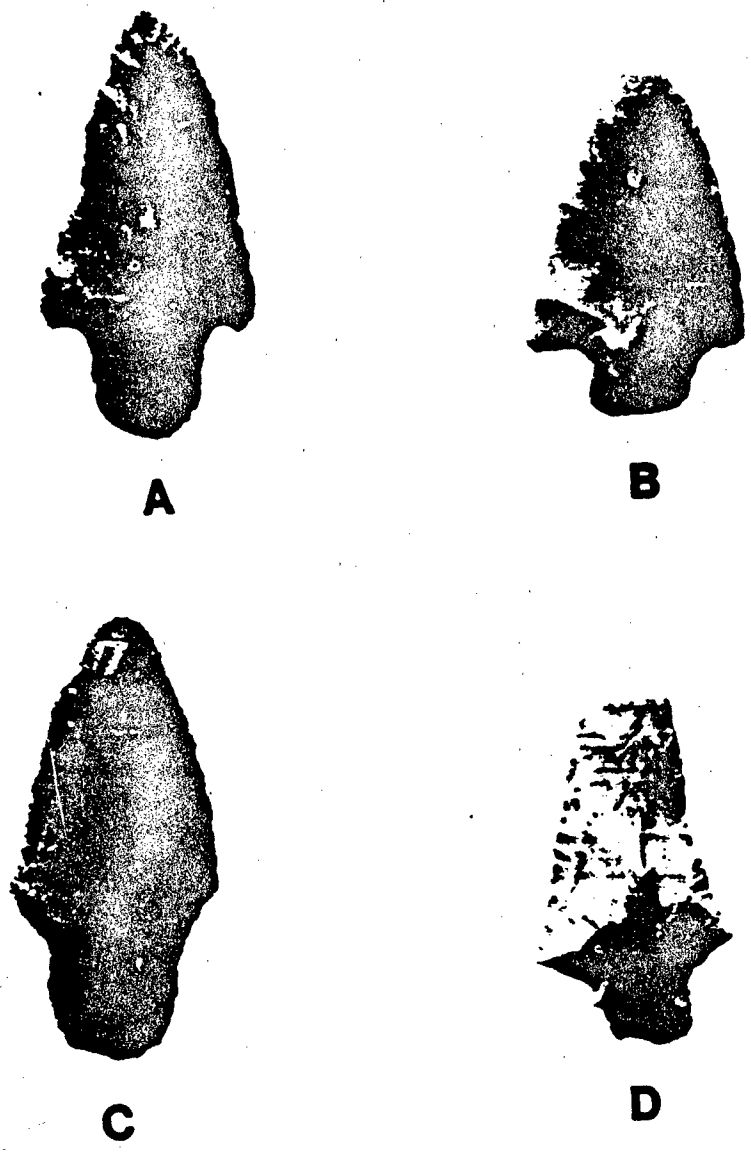

Figure 6-8. Additional Poverty Point Period point types. (A) Delhi (40 SY 40/12); (B) Delhi, var. A (40 SY 40/167); (C) Harris Island, var. B (40 SY 40/13); (D) Arlington (40 SY 45/33).

Table 6-2. Baked Clay Object Type Distribution.

Form:	Spherical			Biconical		Ellipsoidal		Cylindrical			Biscuit		Fragment			
Surface:									Equatorial							
Site	Plain	Cordmarked	Eroded	Plain	Eroded	Plain	Eroded	Plain	Ridge	Eroded	Plain	Cane Punct.	Plain	ordmarked	Cane Punct.	Eroded
40 SY 31	1	1						2								
40 SY 37	1															
40 SY 38	1															
40 SY 39					1		2			2		1			2	14
40 SY 40	6			1						1						3
40 SY 41			1							1						2
40 SY 42	2			1				1	1							2
40 SY 45			11						1	14						28
40 SY 47			1	2						1					1	2
40 SY 49																
40 SY 53																
40 SY 54	14			12		3		10						2		2
40 SY 56			2				1	4		2			1			30
40 SY 59	12							1								45
40 SY 87								1								1
40 SY 112								1			1					1
40 SY 118	1															
40 SY 125	1												1		1	
40 SY 261	1															8
40 SY 262	4							10								
40 SY 265	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
40 SY 268																
40 SY 269																
40 SY 275																
40 SY 307																
Totals	45	1	15	17	1	3	3	29	2	20	1	1	2	2	4	138

overlooking the valley and 40 SY 87 is on a low ridge along the edge of the Hurricane Creek valley about 2 mi south of Nonconnah Creek. Secondary components appear at 40 SY 37, 40 SY 39, and 40 SY 275. Site 40 SY 37 is on a low terrace edge, 40 SY 39 is on a side creek floodplain, and 40 SY 275 is on a ridge crest above the floodplain. The

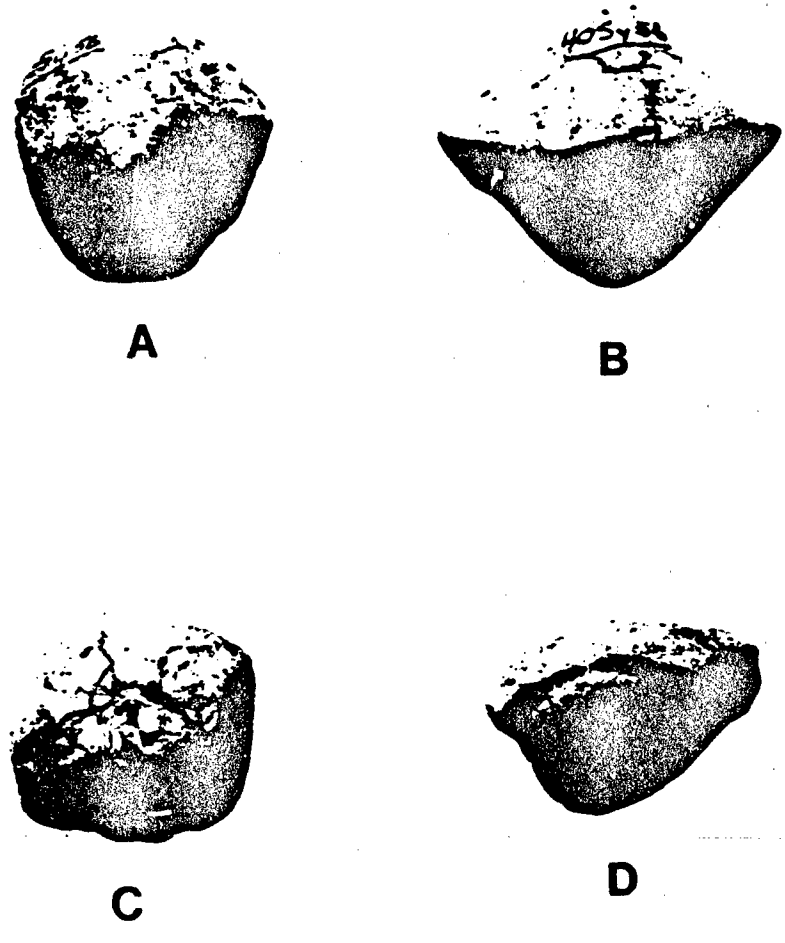

Figure 6-9. Baked clay object types (all from 40 SY 56). (A) Spherical Plain, (B) Biconical Plain, (C) Cylindrical Plain, (D) Cane Punctate (fragment).

Table 6-3. Poverty Point Component Summaries.

Site No.	Topographic Setting	Projectile Points	Baked Clay Objects and Fragments
40 SY 7	Top of high ridge above flood plain	6	--
40 SY 29	Floodplain	1	--
40 SY 31	High terraces	2	4
40 SY 32	Terrace	5	--
40 SY 34	Terrace	1	--
40 SY 37	Low terrace edge	8	1
40 SY 38	Side creek floodplain	3	1
40 SY 39	Side creek floodplain	--	19
40 SY 40	Low terrace edge	40	13
40 SY 41	Low terrace edge	4	3
40 SY 42	Low terrace edge	--	1
40 SY 43	Low terrace	3	--
40 SY 44	Low terrace	1	--
40 SY 45	End of high ridge spur into floodplain	18	7
40 SY 46	Low terrace	1	--
40 SY 47	Low terrace	12	54
40 SY 48	End of high ridge spur into floodplain	3	--
40 SY 49	End of high ridge spur into floodplain	3	1
40 SY 50	Terrace	1	--
40 SY 53	Side creek terrace	--	6
40 SY 54	Low terrace edge	--	2

Table 6-3 concluded.

Site No.	Topographic Setting	Projectile Points	Baked Clay Objects and Fragments
40 SY 56	Low terrace	22	71
40 SY 57	Low terrace at end of low ridge spur	15	--
40 SY 58	Low terrace at end of low ridge spur	2	--
40 SY 59	Low terrace edge	1	1
20 SY 87	Upland, on Hurricane Cr.	1	66
40 SY 90	Low terrace remnant	1	--
40 SY 112	Low terrace	--	1
40 SY 118	Low terrace	--	2
40 SY 120	Low terrace at end of low ridge spur	1	--
40 SY 124	Low terrace edge	1	--
40 SY 125	Low terrace remnant	--	1
40 SY 231	Terrace edge	1	--
40 SY 261	End of ridge spur on side creek	--	3
40 SY 262	End of ridge spur on side creek	--	1
40 SY 265	End of ridge spur on side creek	--	1
40 SY 268	End of low ridge spur into floodplain	1	1
40 SY 269	End of low ridge spur into floodplain	1	1
40 SY 275	Crest of ridge over floodplain	--	22
40 SY 307	Upland, Hurricane Creek headquarters	4	1

remaining sites with only a few items per component include three on high ridges overlooking the floodplain, twenty-one on terrace surfaces in the main valley, one on the main floodplain, four on ridges overlooking side creek valleys, one on a side creek terrace, and one on a side creek floodplain. There was insufficient upland survey work done in the drainage prior to development to assure a lack of large upland sites, although they seem unlikely on the basis of work done in the adjacent Wolf and Loosahatchie drainages.

Extensive survey of the Wolf drainage (Peterson 1979a) suggests only sporadic use of that area during the period rather than a resident social unit. Work done in the Loosahatchie drainage (Peterson 1979b) suggests occupation by a group different from the one in the Nonconnah drainage. Contrast in the baked clay object frequencies shows up particularly in higher spherical and ellipsoidal plain frequencies in the Loosahatchie drainage, along with much lower biconical plain and cylindrical plain frequencies. DeSoto County, Mississippi, situated at the northern end of the Mississippi River alluvial plain east of the river, has only a small representation due to very slight survey work, but appears to have higher frequencies of spherical and ellipsoidal plain and a much lower frequency of cylindrical plain than the Nonconnah drainage.

Early Woodland Period

Early Woodland components (Figure 6-10; Table 6-4) are recognizable primarily by ceramics with a distinctive paste which can be characterized as a nonlaminated variant of Tchefuncte (Smith 1979c) or as a variety of Baytown plain (Connaway and McGahey 1971). The paste is generally smooth to contorted in texture with a small number of large clay pellets/chunks as the tempering agent. Surface finishes (Table 6-5) are primarily plain (Figure 6-11, C) (65) with coarse cordmarking (Figure 6-11, B) (17) and fabric impressing (Figure 6-11, E) (4) as secondary finishes. Decorated types included Twin Lakes Punctated (1), Tammany Punctated (Figure 6-11, H) (1), and Cormorant Cord Impressed (Figure 6-11, D and F) (2). Surface erosion rendered the surface finish of 88 sherds unidentifiable.

Projectile point types (Table 6-6) possibly included in the local Early Woodland complex are Adena, var. A (5), Adena, var. B (1), Mabin, var. A (Figure 6-12, A) (7), Mabin, var. B (Figure 6-12, B) (2), Claiborne, var. A (Figure 6-12, C) (3), and Claiborne, var. B (Figure 6-12, D) (4). The Mabin and Claiborne types may well have continued into the Middle Woodland period, but there is no data available to distinguish early or late variants should such exist. Examination of point type distributions with respect to components present on the sites produced no useful information because all of the sites with projectile points were multicomponent.

Table 6-7 summarizes the cumulative sherd type frequencies for the Nonconnah Creek drainage and adjacent areas. The contrasts suggest the existence of distinct social units in each area. Unfortunately, the individual site collections are not large enough to attempt construction of an internal chronology for any of the areas. Continued use of baked clay objects into the Early Woodland period may or may not have occurred in the Nonconnah drainage, but there is no way to determine this from the data available. The sites with the most pottery are not only those with the largest Poverty Point occupations, but also those with the most other components. Perhaps of particular significance is the presence of early, but not late, Poverty Point projectile point types on many of these sites. This pattern suggests that the baked clay objects and the sherds can be provisionally treated as indicators of different components until such time that the extent and nature of the temporal overlap of the two classes can be determined.

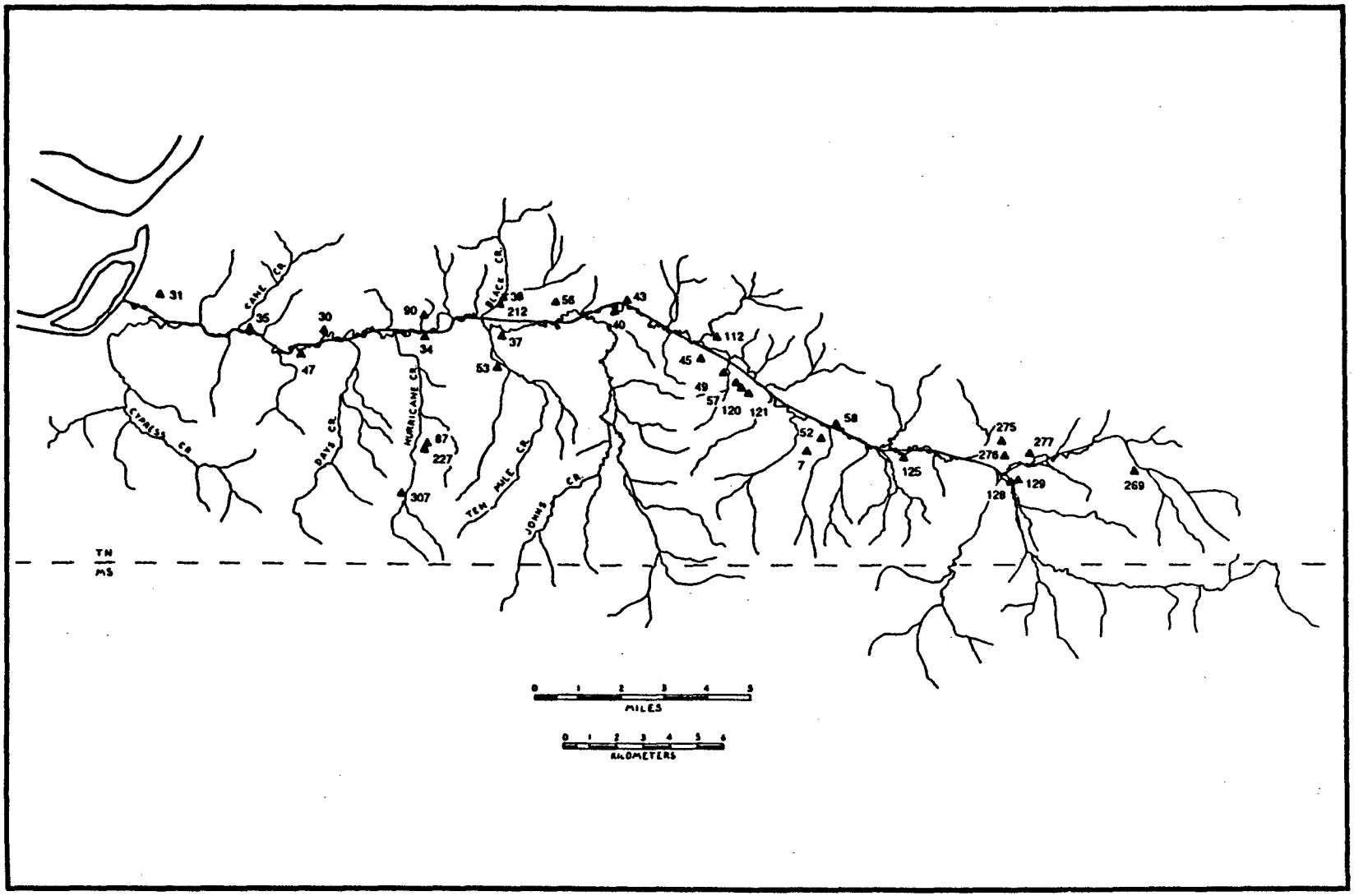

Figure 6-10. Sites with Early Woodland components within the Nonconnah Creek drainage.

Table 6-4. Summary of Early Woodland Components.

Site No.	Topographic Setting	Sherd Count
40 SY 7	Top of high ridge over floodplain	4
40 SY 30	Base of bluff	2
40 SY 31	High terrace	11
40 SY 34	Floodplain	3
40 SY 35	Low terrace	16
40 SY 37	Low terrace edge	9
40 SY 38	Side creek floodplain	5
40 SY 40	Low terrace edge	5
40 SY 43	Low terrace	3
40 SY 45	End of high ridge into floodplain	16
40 SY 47	Low terrace	20
40 SY 49	End of high ridge into floodplain	2
40 SY 52	Floodplain	1
40 SY 53	Side creek terrace	1
40 SY 56	Low terrace	44
40 SY 57	Low terrace/end of ridge spur	5
40 SY 58	Low terrace/end of ridge spur	1
40 SY 87	Upland, Hurricane Creek	7
40 SY 90	Low terrace remnant	1
40 SY 112	Low terrace	1
40 SY 121	End of ridge spur into floodplain	1
40 SY 125	Low terrace remnant	2
40 SY 128	Floodplain	1
40 SY 129	Floodplain	2
40 SY 212	Floodplain	3
40 SY 227	Upland, Hurricane Creek	2
40 SY 269	End of ridge spur into floodplain	1
40 SY 275	Ridge above floodplain	5
40 SY 276	Low terrace	1
40 SY 277	End of ridge spur into floodplain	1
40 SY 307	Upland, Hurricane Creek	2
	Total	**178**

Table 6-5. Counts of Sherds with Early Woodland Paste.

Site	Cordmarked	Fabric Impressed	Plain	Decorated	Eroded	Totals
40 SY 7			2		2	4
40 SY 30					2	2
40 SY 31	1		2		8	11
40 SY 34					3	3
40 SY 35		1	4		11	16
40 SY 37	2		6		1	9
40 SY 38		1	4			5
40 SY 40				1 Twin Lks. Punctated 1 Tammany Punctated	3	5
40 SY 43			1		2	3
40 SY 45		2	8		6	16
40 SY 47			9	1 Twin Lks. Punctated 1 Cormorant Cord Imp.	9	20
40 SY 49					2	2
40 SY 52					1	1
40 SY 53			1			1
40 SY 56	5		17		18	44
40 SY 57	3		1		1	5
40 SY 58					1	1
40 SY 87					7	7
40 SY 90			1			1
40 SY 112			1			1
40 SY 121					1	1
40 SY 125	2					2
40 SY 128			1			1
40 SY 129			1		1	2
40 SY 212			1		2	3
40 SY 227					2	2
40 SY 269					1	1
40 SY 275			3		2	5
40 SY 276			1			1
40 SY 277			1			1
40 SY 307					2	2
Totals	17	4	65	4	88	178
	18.9%	4.4%	72.2%	4.4%	(90 identifiable)	

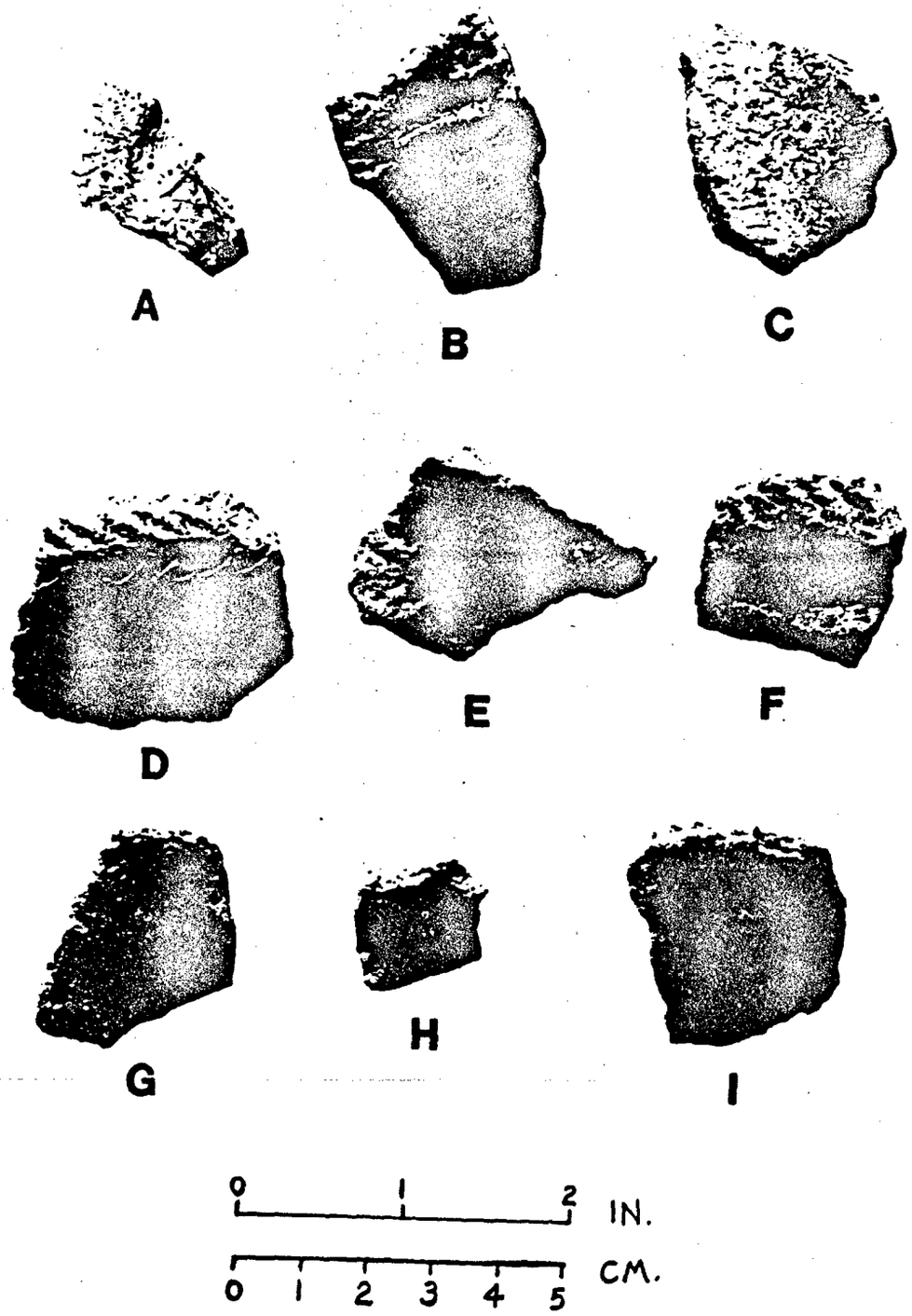

Figure 6-11. Ceramic types. (A) Wheeler Plain (40 SY 40); (B) Very coarse cordmarked, Early Woodland paste (40 SY 56); (C) Plain, Early Woodland paste (40 SY 56); (D,F) Cormorant Cord Impressed, Early Woodland paste (40 SY 47); (E) Withers Fabric Impressed, Early Woodland paste (40 SY 45); (G) Cormorant Cord Impressed, Thomas paste (40 SY 47); (H) Tammany Punctated, Thomas paste (40 SY 47); (I) Furrs Cordmarked (40 SY 40).

Table 6-6. Distribution of Presumed Woodland Point Types.

Type:	Adena		Mabin		Claiborne		Frazier	Totals
Variety:	A	B	A	B	A	B		
Site No.								
40 SY 7						1		1
40 SY 29			1					1
40 SY 30			1					1
40 SY 37	1							1
40 SY 40		1		3			1	5
40 SY 41	1						1	2
40 SY 43			1					1
40 SY 45	1				2		1	4
40 SY 47			1		1			2
40 SY 49	1		1			1		3
40 SY 56	1			3		1		5
40 SY 57						1		1
40 SY 58	—	—	1	—	—	—	—	1
Totals	5	1	6	6	3	4	3	28

Middle Woodland Period

The Middle Woodland cultural period in the Memphis area is perhaps one of the least spectacular in the midcontinental U.S. There are few mounds recorded (none excavated southwest of the Hatchie River), and virtually none of the characteristic, decorated ceramic types or specialized art objects of the period noted elsewhere have been recorded in this area. The Lower Mississippi Valley-derived Tchula/Tchefuncte-like ceramic tradition is replaced by the Miller tradition of the Hatchie-Tombigbee headwaters area through a transitional stage of unknown duration, culminating in the production of orthodox Baldwin wares. The transitional ceramics are characterized by a smooth-textured paste including both the large clay chunks of the Early Woodland

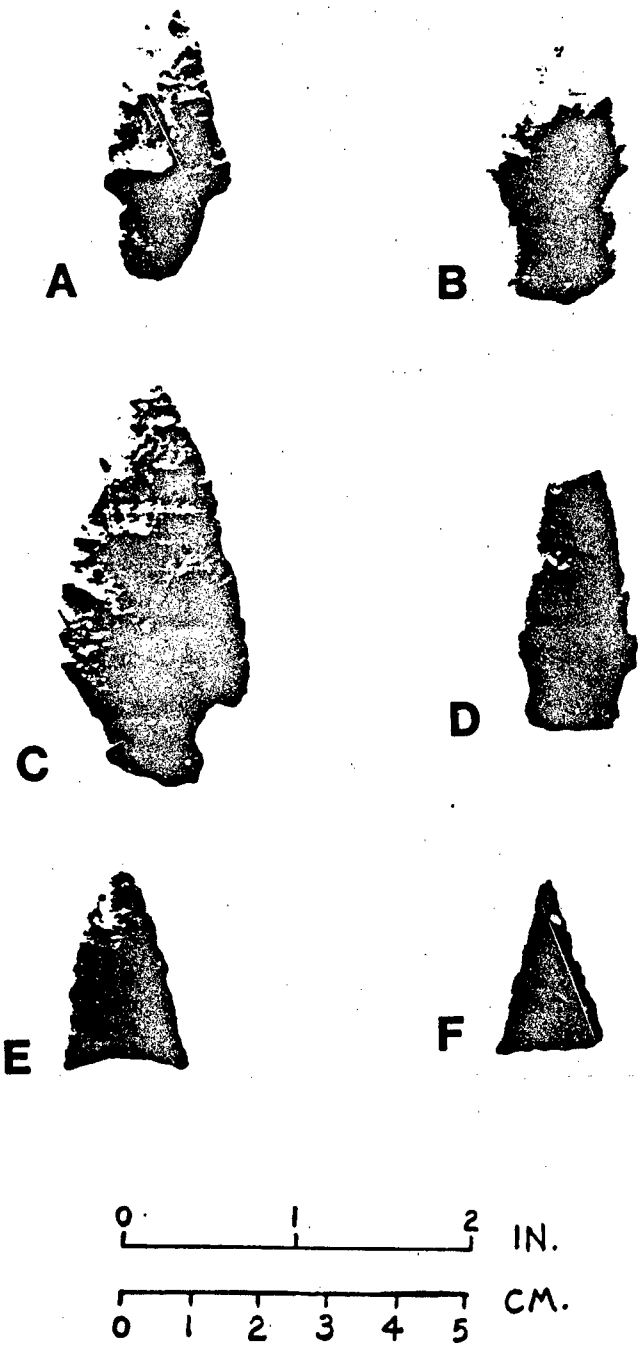

Figure 6-12. Woodland and Mississippi Period point types. (A) Mabin, var. A (40 SY 47/6); (B) Mabin, var. B (40 SY 56/32); (C) Claiborne, var. A (40 SY 47/15); (D) Claiborne, var. B (40 SY 56/66); (E) Madison, var. A (40 SY 37/13); (F) Madison, var. B (40 SY 56/57).

Table 6-7. Frequencies of Sherds with Early Woodland Paste in the Nonconnah and Adjacent Drainages/Districts*.

Drainage or District	Cordmarked		Fabric Impressed		Net Imp.		Plain		Cord. Imp.	Twin Lks. Punct.	Tammany Punctated	Indian Bay St.	Total*
	No.	%	No.	%	No.	%	No.	%					
Withers	31	9.4	63	19.0			237	71.6	--	1	—	1	333
Nonconnah	17	18.9	4	4.4			65	72.2	1	2	1	—	90
Wolf	4	3.2	31	25.2			87	70.7	1	--	--	--	123
Loosahatchie	18	18.9	12	12.6	2	2.6	60	63.2	2	1	—	—	95

* Identifiable sherds only; eroded sherds approximate half the totals from each drainage.

ware and the coarse silt to fine sand characteristic of Baldwin ware. Surface treatment frequencies of this ware generally show increased levels of cordmarking and decreased levels of fabric-impressed surfaces relative to characteristic Early Woodland paste frequencies. This transitional ware will be referred to here as "Thomas," per the discussion in Smith (1979c:75-78). Usage of the term here is restricted to ware with approximately 10 to 20% large clay pellets by volume added to a clay and fine sand mixture with almost as much sand as Baldwin ware. Distribution of the ware is presented in Figure 6-13 and Table 6-8. Early Woodland decorative types, particularly Twin Lakes Punctated, continue in use through the period.

Only three of the components with Baldwin ware (Table 6-9), 40 SY 31, 40 SY 90, and 40 SY 275, lack Thomas ware. The largest collections of each ware come from the same five sites: 40 SY 40, 40 SY 45, 40 SY 47, 40 SY 49, and 40 SY 87. Of these, 40 SY 45 and 40 SY 47 have more Thomas ware, while the others have more Baldwin. The five main sites include two on terraces in the main valley, 40 SY 40 and 40 SY 47; two on the end of high ridge spurs into the floodplain, 40 SY 45 and 40 SY 49; and one, 40 SY 87, in the loess uplands overlooking Hurricane Creek. Table 6-6, listed previously, provides the distribution of presumed Woodland projectile point types in the drainage. As in the case of the Early Woodland ceramics, there is no apparent correlation between particular point types and ceramic wares due to the multicomponent nature of the sites involved.

The apparently more diffuse settlement pattern of the Early Woodland period produced no sites which had large samples of identifiable sherds. By Middle Woodland times, however, three components, at 40 SY 40, 40 SY 45, and 40 SY 47, which produced enough identifiable sherds for useful comparisons, had appeared. In each case, decoration patterns on Thomas and Baldwin wares are similar, although there is more cordmarking and less plainware associated with Baldwin paste. This corresponds to the long-term, regional Woodland trend of replacement of the earlier plainware-dominated ceramic complexes with cordmarked wares. As seen in Table 6-10, the frequency of cordmarked surface finishes parallels the frequency of Baldwin ware, but Baldwin does not appear to have completely replaced Thomas in the Nonconnah Creek drainage as it seems to have done further east.

Comparisons between the Nonconnah Creek drainage and its neighbors again suggests that it was occupied by a distinct social unit during the Middle Woodland period (Table 6-11). To the south, however, where Withers Fabric-Impressed is dominant, there is so little Baldwin material as to raise the possibility of either abandonment or incomplete paste change during the period. Thomas ware decorative frequencies for the Wolf and Loosahatchie drainages are distinctively high in fabric impressed sherds, especially in the Loosahatchie. By the time Baldwin ware had come into more general use, however, the decorative frequencies are so nearly identical for all sherds as to suggest fusion of the formerly separate Wolf and Loosahatchie traditions.

A few (21) eroded sherds of Knob Creek ware (Smith 1979:42) were found on eight sites in the Nonconnah Creek drainage (Table 6-12), but only 40 SY 40 (10) had more than three sherds. The Loosahatchie drainage (Smith 1979c:58) also had only a few sherds (14), with a maximum of four on any one site, with nine sites represented. In terms of site numbers, the prime drainage in which Knob Creek ware is locally represented is the Wolf River, where it is present on 32 sites for a total of 133 sherds. Knob Creek ware may represent the latest Middle Woodland (or perhaps an initial Late Woodland) occupation of the area, as it appears to have been a continuation of the combined Wolf-Loosahatchie tradition.

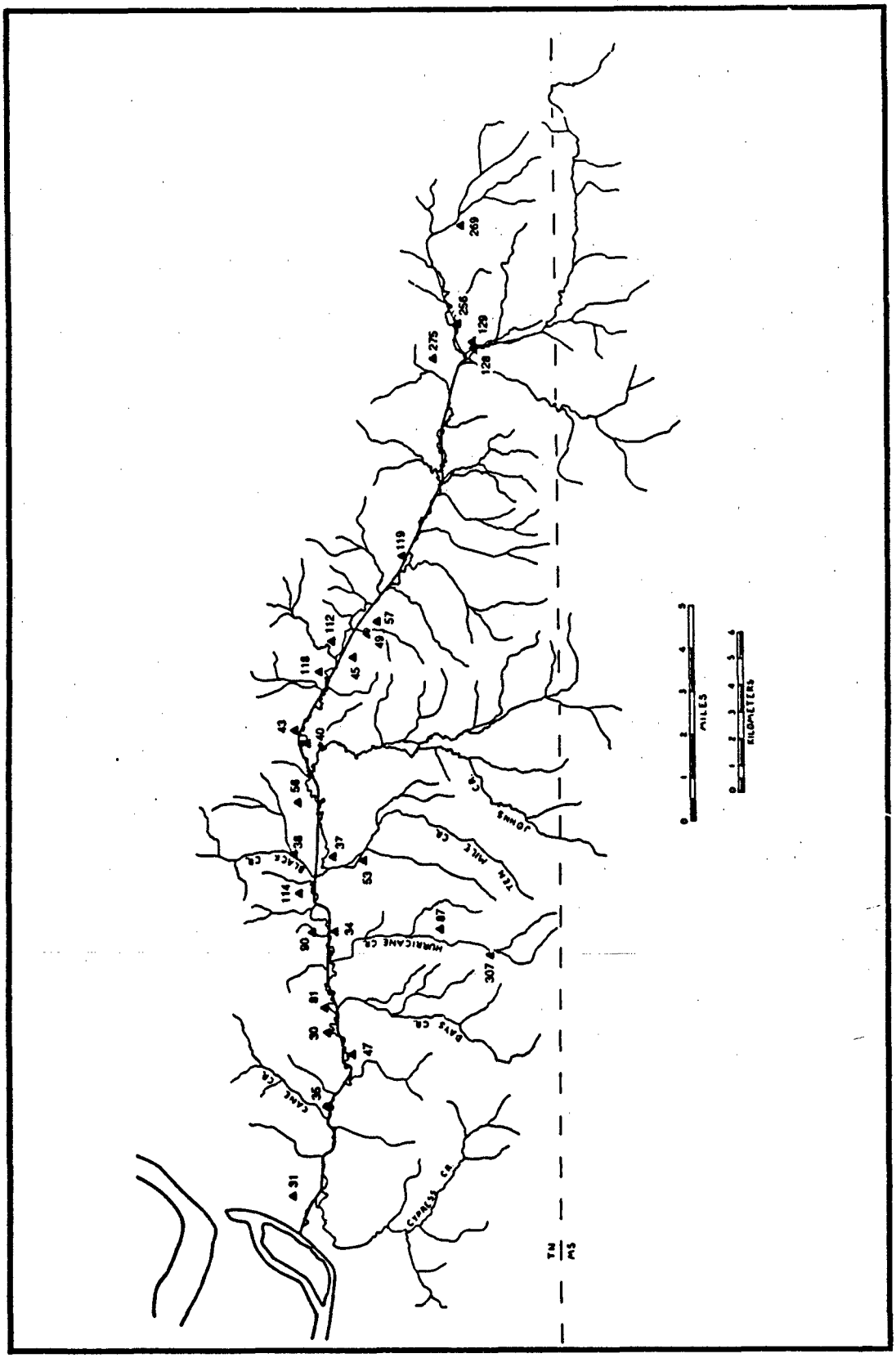

Figure 6-13. Sites with Middle Woodland components within the Nonconnah Creek drainage.

Table 6-8. Counts of Sherds with Thomas Paste, Nonconnah Creek Drainage.

Site	Cordmarked	Fabric Impressed	Plain	Decorated	Eroded	Totals
40 SY 30					4	4
40 SY 34				1 Incised	6	7
40 SY 35			1		1	2
40 SY 37			2		2	4
40 SY 38			3		4	7
40 SY 40	56		15		30	101
40 SY 43	2				3	5
40 SY 45	33	2	25		62	122
40 SY 47			2	1 Twin Lks. 1 Tammany	20	24
40 SY 49	30		6		43	79
40 SY 53	1				11	12
40 SY 56			2		6	8
40 SY 57	1		1		1	3
40 SY 81					1	1
40 SY 87			9	3 Twin Lks.	19	31
40 SY 112					1	1
40 SY 114					1	1
40 SY 118	1					1
40 SY 119	1					1
40 SY 128					1	1
40 SY 129					1	1
40 SY 256					2	2
40 SY 269					3	3
40 SY 307					1	1
Totals	**125**	**2**	**66**	**6**	**223**	**422**
Total Decorated	**125** **62.8%**	**2** **1.0%**	**66** **33.1%**	**1 Incised .5%** **1 Tammany .5%** **4 Twin Lks. 2%**		**199**

Table 6-9. Counts of Sherds with Baldwin Paste, Nonconnah Creek Drainage.

Site No.	Cordmarked	Plain	Decorated	Eroded	Total
40 SY 31		1		4	5
40 SY 35		1		1	2
40 SY 37				1	1
40 SY 38				2	2
40 SY 40	81	14		63	158
40 SY 45	31	10		32	73
40 SY 47		3	1 Twin Lks.	10	14
40 SY 49	45			71	116
40 SY 53		1			1
40 SY 56	1	1		3	5
40 SY 81				1	1
40 SY 87		5	1 Twin Lks.	28	34
40 SY 90		1			1
40 SY 112				1	1
40 SY 129				1	1
40 SY 275		1			1
40 SY 307				1	1
Totals	**158**	**38**	**2**	**219**	**417**
Totals	**158**	**38**	**2 Twin Lks.**		**198**
Decorated	**79.8%**	**19.2%**	**1.0%**		

Late Woodland Period

Late Woodland components throughout the region are characterized by ceramics with Baytown paste, predominantly decorated with cordmarking, although check stamping appears as a minority decorative treatment in terminal Late Woodland contexts (Table 6-13). An exception is the sand-tempered Barnes ware found in the northwestern portion of the central Mississippi alluvial valley (Morse and Morse 1983:180-199; Phillips 1970:901-912; Walthall 1980:131-141 and 154-155).

The Nonconnah Creek drainage is no exception to the general lack of recognized Late Woodland components in the western Tennessee uplands (Smith 1979a, 1979b, 1979c), even though they are plentiful in the adjacent Mississippi River alluvial valley. This suggests a reliance on the ecological situation found in the Mississippi floodplain. There are no clearly Late Woodland components in the drainage, and very few with significant amounts of Baytown paste pottery.

Table 6-10. Surface Finish Frequencies of Sherds with Thomas and Baldwin Wares, Sites 40 SY 40, 40 SY 45, and 40 SY 49.

A. Thomas Ware:

Site	Cordmarked		Fabric Impressed		Plain		Total I.D.	Eroded	Total Thomas		Total M. Woodland
	No.	%	No.	%	No	%	No.	No.	No.	%	No.
40 SY 40	56	78.9	—	—	15	21.1	71	30	101	39.0	259
40 SY 45	33	55.0	2	3.3	25	41.7	60	62	122	62.6	195
40 SY 49	30	83.3	—	—	6	16.7	36	43	79	40.5	195

B. Baldwin Ware:

									Total Baldwin		
40 SY 40	81	85.3	--	--	14	14.7	95	63	158	61.0	259
40 SY 45	31	75.6	--	--	10	24.4	41	32	73	37.4	195
40 SY 49	45	100.0	--	--	--	--	45	71	116	59.5	195

Table 6-11. Frequency Comparisons of Sherds with Middle Woodland Paste in the Nonconnah and Adjacent Drainages/Districts*.

Drainage or District	Cordmarked		Fabric Impressed		Net Impressed		Plain		Cord Impressed		Twin Lks. Punctated		Tammany Punctated		Incised		Total I.D.
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Thomas Ware																	
Withers	7	10.6	9	13.6	--	--	50	75.8	--	--	--	--	--	--	--	--	66
Nonconnah	125	62.8	2	1.0	--	--	66	33.1	--	--	4	2.0	1	0.5	1	0.5	199
Wolf	35	15.4	64	29.0	--	--	121	54.8	1	1.0	--	--	--	--	--	--	111
Loosahatchie	15	20.8	33	45.8	--	--	24	33.3	--	--	--	--	--	--	--	--	72
Baldwin Ware																	
Withers	--	--	--	--	--	--	12	92.3	--	--	--	--	1	7.7	--	--	13
Nonconnah	158	79.8	--	--	--	--	38	19.2	--	--	2	1.0	--	--	--	--	198
Wolf	73	65.8	13	11.7	1	0.9	23	20.7	1	1.0	1	1.0	--	--	--	--	111
Loosahatchie	35	67.3	6	11.5	--	--	11	21.2	--	--	--	--	--	--	--	--	52

* Includes only sherds with identifiable surface finishes; sherds with eroded surfaces approximate half of each group in each area.

The transition to initial Mississippian culture in the area is marked ceramically by the adoption of Mississippian vessel forms and the displacement of cordmarked and check stamped vessel surfaces by plain surfaces and occasional Coles Creek-derived decorative modes.

Table 6-12. Sherd Frequencies of Knob Creek Ware in the Nonconnah and Adjacent Drainages/Districts.

Drainage or District	Cordmarked		Fabric Impressed		Plain		Eroded	Total
	No.	%	No.	%	No.	%	No.	
Withers	2	--	--	--	1	--	2	5
Nonconnah	1	--	--	--	--	--	20	21
Wolf	31	83.8	3	8.1	3	8.1	96	133
Loosahatchie	2	--	--	--	1	--	11	14

Mississippi Period

The Mississippi period continued the apparent Mississippi River alluvial valley ecological specialization of the Late Woodland. Ceramic, sociopolitical, and economic changes culminated in the complex chiefdoms found by the DeSoto expedition. Nonconnah Creek enters the Mississippi near the center of the Walls Phase territory, a district which appears to have encompassed most of Shelby County, Tennessee, and DeSoto County, Mississippi. The Chucalissa site, 40 SY 1, is on the blufftop overlooking the alluvial valley just southwest of the present mouth of Nonconnah Creek. It was occupied intermittently through most of the period and was the local center closest to the drainage. Because of the wealth of data available on Mississippi period sites in the area, several local phases have been defined over the years, and are briefly discussed below. Figures 6-14 and 6-15 illustrate sites with early and late Mississippi period components, respectively.

Shannon Phase

The Shannon Phase is postulated as the first of the early Mississippian phases in the region. Components of this phase are characterized by 75 to 90% Baytown Plain, 10 to 20% Mulberry Creek Cordmarked, up to 10% Wheeler Check Stamped, up to 4% Larto Red Filmed, and various decorated and trade types including Evansville Punctated, Mazique Incised, L'Eau Noire Incised, and brushed-surface ware. The phase area extends from the alluvial valley portion of DeSoto County northwards into northern Shelby County. It is represented in the Nonconnah Creek drainage at 40 SY 35, a site on a low terrace in the lower part of the drainage. Unfortunately, no excavated components exist, thus raising the possibility that the seven components in question are all fortuitous mixtures of Late Woodland and later Early Mississippian occupational debris. There are, however, no recorded Late Woodland components to supply the check stamped ware.

Table 6–13. Frequencies of Sherds with Baytown Paste in the Nonconnah Creek Drainage.

Site No.	Cordmarked		Square Check Stamped		Rectangular Check Stamped		Plain		Decorated		Eroded	Totals	
	No.	%	No.	%	No.	%	No.	%	No.	%		I.D.	All
40 SY 6							3				2	3	5
40 SY 30							2					2	2
40 SY 31							2					2	2
40 SY 35	2	7.4	2	7.4	1	3.7	22	81.5			12	27	39
40 SY 37							72	96.0	1 red film	4.0	114	79	189
40 SY 38	1						7				4	8	12
40 SY 39											1		1
40 SY 40	3						5				6	8	14
40 SY 45							40				9	40	49
40 SY 47							5				5	5	10
40 SY 49	2											2	2
40 SY 53							1				6	1	7
40 SY 81							2				1	2	3
40 SY 87							1					1	1

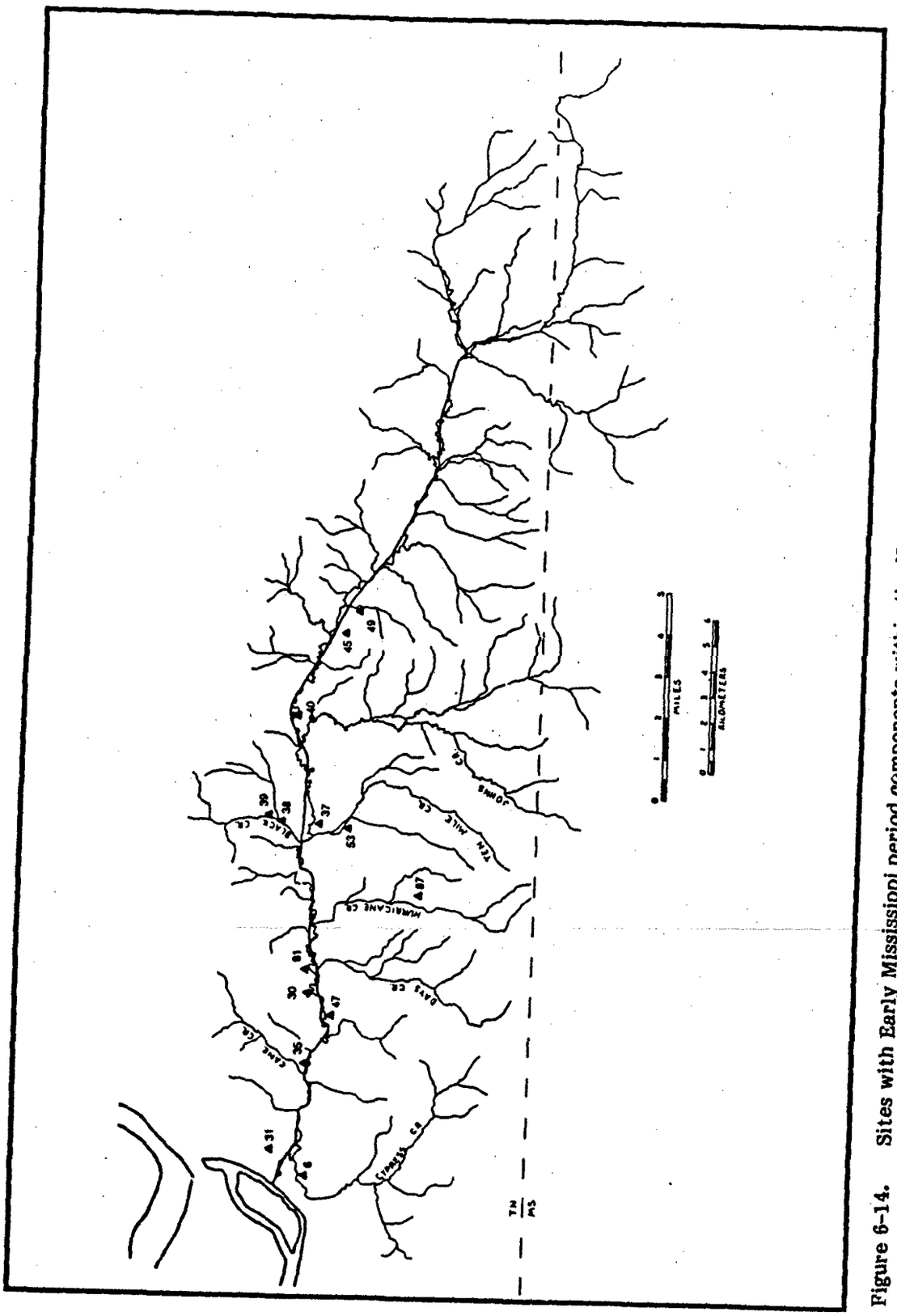

Figure 6-14. Sites with Early Mississippi period components within the Nonconnah Creek drainage.

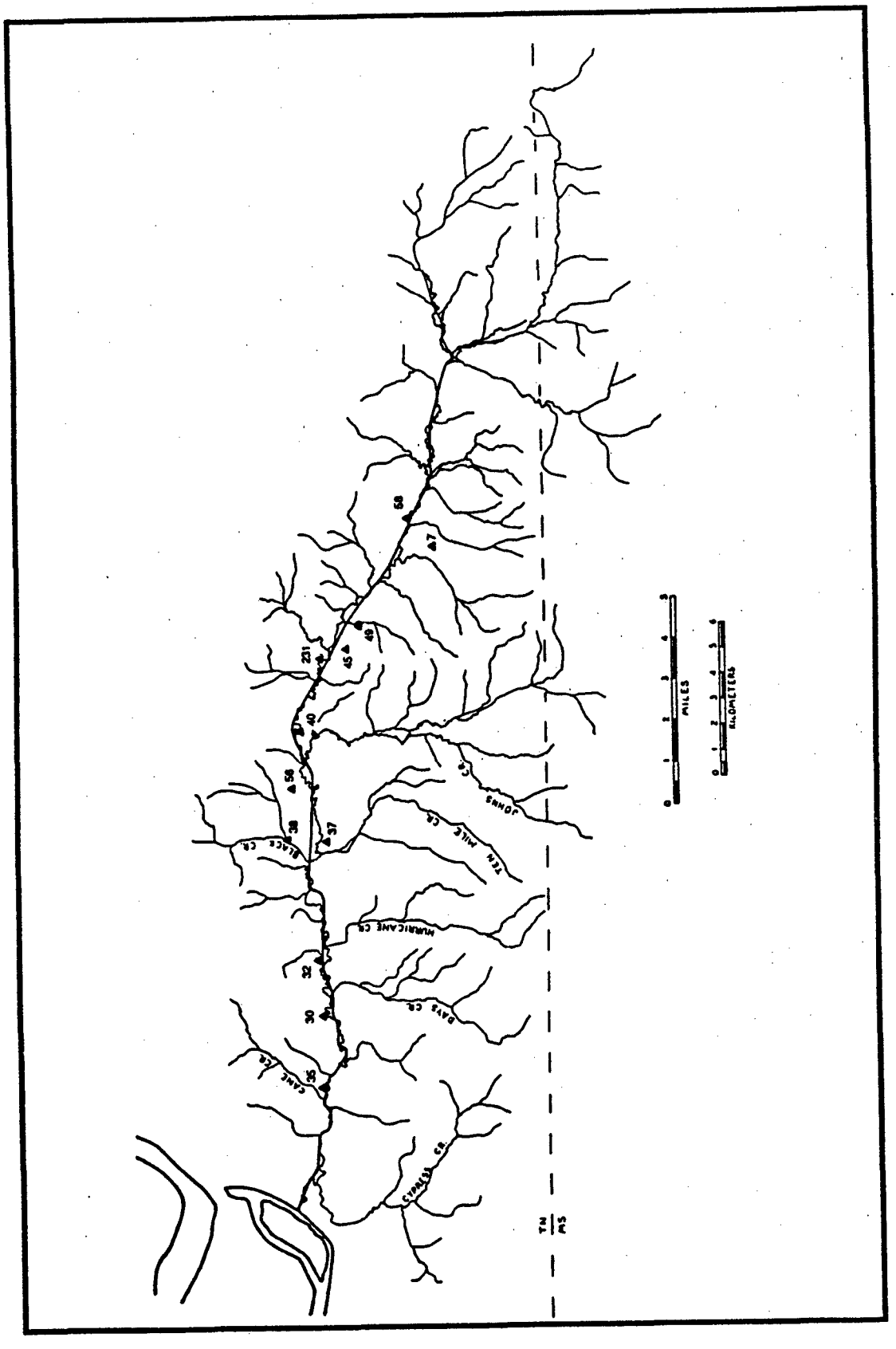

Figure 6-15. Sites with Late Mississippi period components within the Nonconnah Creek drainage.

Ensley Phase

The Ensley Phase has been defined (Smith 1972:v-vi) primarily on the basis of data from the Chucalissa site just outside the present study area. Ceramics consist of 95 to 99% Baytown Plain along with Larto Red, Mazique Incised, Evansville Punctated, and occasional Coles Creek types as apparent trade ware. Vessel forms include globular jars, occasionally with loop handles, and simple bowls. Open-corner, wall-trench houses are present in the Chucalissa component. The Ensley Phase components at 40 SY 37 and 40 SY 45 are the only ones in the Nonconnah Creek drainage, other than the Shannon component at 40 SY 35, with sufficient Baytown ware for assignment. Site 40 SY 37 was on a low terrace just above Tenmile Creek in the central part of the valley, and 40 SY 45 was on the end of a high ridge extending into the floodplain.

Boxtown Phase

The Boxtown Phase is the first of the two Late Mississippian phases defined in the area. It is best known from the component at Chucalissa (Smith 1972:iv-v). The ceramic complex consists of 60 to 70% Mississippi Plain, vars. Neeley's Ferry and Boxtown, and 20 to 25% Bell Plain with Old Town Red, Barton Incised, and Fortune Noded as the main decorated types. Low-rimmed, globular jars with slightly everted rims, water bottles, and simple bowls are the main vessel forms. Trade ware includes Matthews Incised, Beckwith Incised, and Jones Bayou Brushed. Triangular projectile points, sharing the same size and form range as those from Walls contexts, are typical. Houses are of open-corner, wall-trench construction, 10 to 16 ft (3 to 5 m) square with square or rectangular hearths. A small Boxtown Phase component is present at 40 SY 37.

Walls Phase

The Walls Phase is one of the most widely known in the area, and appears in a series of various forms (Phillips et al. 1951; Phillips 1970:936-938; Smith 1972:ii-iv, 1985). For present purposes, the phase will be restricted to DeSoto County, Mississippi, and the southern two-thirds of Shelby County, Tennessee. A probable paramount site was in and around DeSoto Park, but was nearly destroyed in 1862 by construction of Fort Pickering, which incorporated one of the mounds as a gun emplacement. A secondary major center was at Walls, in DeSoto County, and at least seven other sites with a single, major mound were present in the territory. These sites also had outlying hamlets in some cases, apparently to exploit resources at inconvenient distances from the main towns. Apparent hunting-camp components have been found in the Wolf, Loosahatchie, and Nonconnah drainages up to 20 mi into the hills east of the bluff line.

The basic ceramic complex consists of about 55 to 75% Bell Plain, 20 to 40% Mississippi Plain, var. Neeley's Ferry, 5 to 10% Parkin Punctated, 1 to 3% Barton Incised, var. Barton, 1 to 3% Old Town Red, and a consistent presence of the combination Kent Incised, Ranch Incised, Rhodes Incised, and Walls Engraved. Vessel forms consist primarily of globular jars with sharply defined necks, short-necked water bottles with globular to ovate bodies, and a variety of bowl forms. Jars are usually of Neeley's Ferry paste, water bottles of Bell paste, and bowls are more often of Bell than Neeley's Ferry paste.

Major mounds in the secondary centers usually face south across a plaza, but the main mound at the DeSoto Park center appears to have faced eastward. The plaza at Chucalissa was surrounded by a ridge composed of overlapping, single-stage house mounds. The main mound at Chucalissa had a structure about 50 ft (15 m) square on

the west side and a somewhat smaller structure on the east side. Structures on the house mounds are 18 to 22 ft (5.5 to 6.7 m) square, while those in the areas beyond are 15 to 20 ft (4.5 to 6 m) square. Most are of individual post construction, often set into shallow basins with the addition of shallow trenches along the outer wall line to permit seating of the wall covering into the ground as a seal against the weather.

Subsistence data shows heavy emphasis on corn and deer as the dietary staples, with beans, sunflower, persimmon, hickory nuts, turkey, bear, and raccoon as important secondary resources. Fish were undoubtedly of importance, but problems of preservation, identification, and meat-yield estimation have precluded effective analysis of this factor in the diet. Triangular (see Figure 6-12, E-F) and willow-leaf shaped chert arrow points, antler-tine arrow points, and even gar-scale points all served on the tips of hunting weapons.

Only one component in the Nonconnah drainage, at 40 SY 30, has sufficient Late Mississippian pottery, other than the Boxtown component at 40 SY 37, to identify it as a Walls Phase hamlet. This small component was at the base of the bluff on the northern edge of the floodplain about 5 mi up the main valley. There is not yet any reliable means of distinguishing Boxtown Phase triangular points from those of the Walls Phase, or for that matter identification of earlier Mississippian triangular points. Therefore, Table 6-14 must be considered as representing a general summary of Mississippi period camp components in the drainage.

Table 6-14. Distribution of Madison Triangular Projectile Points in the Nonconnah Creek Drainage.

Site	Variety A	Variety B	Variety D	Total
40 SY 7		1		1
40 SY 30	2	2		4
40 SY 32	3		1	4
40 SY 35	2			2
40 SY 37	6	9	2	17
40 SY 38	4	2		6
40 SY 40		4		4
40 SY 45	1		1	2
40 SY 49	1	2		3
40 SY 56	2	1		3
40 SY 58	2	1		3
40 SY 231	1			1

Protohistoric Period

The Protohistoric period is ushered in by a brief glimpse of Mississippian culture at its apex. The DeSoto expedition of 1539-1543 may have passed near the general vicinity of Nonconnah Creek drainage, although probably not directly through it (Hudson 1987; Morse and Morse 1983; Phillips et al. 1951). Survivors of the expedition describe the province of Quizquiz as a polity on the east side of the Mississippi River and under the domination of another group across the river and upstream. The expedition spent a month camped near a Quizquiz town building barges, then crossed the Mississippi River and explored a fairly large area on the other side before departing the area.

All the groups encountered in the vicinity were under hereditary rulers whose power in their respective territories was highly centralized and supported by a hierarchy of descending-status positions. Large fortified towns surrounded by extensive corn fields were noted in these territories. There was enough grain in the towns even at the beginning of the crop season, perhaps as new corn and reserves against crop failure, to satisfy even the Spanish. Political and military activities appear to have been well organized on a relatively large scale.

The next recorded expeditions into the area were those of LaSalle and Marquette and Jolliet in the 1670s and 1680s. These expeditions down the Mississippi encountered only apparent virgin forests and a few wandering Indians who may well have been from far away. The poorly documented Mosopelia were the only people found between the Ohio and Arkansas Rivers, other than a few members of northern Algonquian tribes or several Quapaws and their neighbors who had come north from near the mouth of the Arkansas River. Thus, the large populations described in the DeSoto accounts were generally dismissed as exaggeration until archaeological research of recent decades revealed the scale of Mississippian occupation in the Yazoo and St. Francis basins.

Research by Henry Dobyns (1966) suggests that severe depopulation, often in excess of 90%, was the normal result of contact with Europeans. This was largely due to epidemics of Old World diseases that spread widely early in the contact period, during which maximum population losses occurred. More recent examples from nineteenth-century Indian villages on the upper Great Plains suggest that almost total population loss in concentrated towns, such as those of the Mississippi Valley, could have been quite rapid (Dobyns 1966).

The territory including the Nonconnah Creek drainage was claimed by the Chickasaws by at least the early 1700s and not formally relinquished by them until 1818 when those portions of present-day western Tennessee and Kentucky situated between the Tennessee and Mississippi Rivers, were sold to the United States. The various Chickasaw Bluffs along the Mississippi, at and above modern-day Memphis, were sporadically used for fortifications by Europeans travelling up and down the Mississippi (Williams 1930), but permanent settlement appears to have been delayed until the 1780s or 1790s.

In 1794, the fourth Chickasaw Bluff, located between the Wolf River and Nonconnah Creek, became the site of a Spanish garrison near the mouth of the Wolf River, a nearby trading post, and various residences associated with these operations (Williams 1930:52-55). By this time there was considerable movement through the area, both by land and afloat, and the Chickasaws had begun to complain about squatters in their territory. They also tried to control authorization of those Anglo-Americans who wanted to live there.

The state of North Carolina gave virtually all of Tennessee not already titled by 1783 to speculators (Williams 1930:41-42). Many of these grants in western Tennessee were surveyed at that time, resulting in a much more detailed knowledge of the interior by potential settlers. In all but the small area granted by the Chickasaws to the Spanish in 1794, the illegal nature of settlement combined with prevailing low frontier literacy rates to result in obscure or false dates for whatever settlement may have taken place before 1818.

The Treaty of Old Town was negotiated by Isaac Shelby and Andrew Jackson in 1818. This treaty provided that the territory between the Tennessee and Mississippi Rivers north of 35 degrees north latitude was ceded to the United States for $300,000 payable in $20,000 annual installments. Township and range surveys were begun in 1819, using 5-by-5-mi-square sections, but these were not used in actual practice. The Tennessee-Mississippi boundary line was run and protested several times. A line surveyed by Winchester in 1819 was generally used until the present line located 4.5 mi farther south was established by astronomical observations in 1837. The effect of this change was to incorporate most of the southern half of the Nonconnah drainage into Tennessee, and to establish the 6-mi-square township and range system of land surveying in the area. This system remains visible in the form of the section-line grid pattern of the main roads in that portion of Shelby County south of Winchester Road.

Land titles in western Tennessee remained in chaos for many years after settlement. Most of the legal activity was between Tennessee land speculators and the North Carolina speculators, both at the expense of the occupants whose interests Congress had once sought to protect. North Carolina persisted in issuing titles to western Tennessee land into the 1830s (Williams 1930:112). Shelby County was formed in 1819 at the insistence of John Overton, Andrew Jackson, and James Winchester in order to safeguard their interests as developers of Memphis.

The city of Memphis grew slowly at first, reaching a population of 1,799 in 1840, but grew rapidly afterward. Memphis served as the regional trade center with steamboat, road, and rail connections to the outside world in place by the mid-1850s. Travel across the Nonconnah Creek drainage into Mississippi was largely on Hernando Road (now U.S. Highway 51), Holly Ford Road (now Airways), and Pigeon Roost Road (now Lamar). The uplands rapidly became populated, but the river bottoms did not come under major cultivation until the extensive swamp drainage and stream channelization projects of the late-nineteenth and early-twentieth centuries provided a degree of protection from flooding.

Cotton was the key crop of the region and provided the main source of income; other crops were raised only to the extent necessary to sustain laborers and livestock. Cotton production skyrocketed from 1,000 bales in 1830 to 35,000 bales in 1840, then continued to grow rapidly until the Civil War. Slaves were crucial to cotton production as it was organized prior to the 1860s. Shelby County was one of the leading areas of cotton production and had an extensive slave population in the rural areas. The Whitehaven district in 1860 had a population of 653 whites, 1 free black, and 1,671 slaves, while the Levi district to the west had 192 whites, 4 free blacks, 1 Indian, and 840 slaves (Meeks 1984:15).

The Nonconnah Creek drainage was not the scene of any pitched battles during the Civil War period, but did see continual movement of guerrillas and regular troops of both sides. By June of 1862, after the fall of Corinth and all upriver forts, Memphis had become untenable for the Confederacy. A Confederate Navy fleet remained behind to fight what proved to be a disastrous rear-guard action on June 6, resulting in

the escape of only one vessel. The city was surrendered to the Union Navy and soon occupied by an army under the command of William T. Sherman. Sherman oversaw construction of a massive earthwork fort at the southern edge of Memphis. Picket posts were established at the road and rail crossings of Nonconnah Creek to regulate trade and watch for guerilla movements. The rest of the war was marked by raid and counterraid by small units and rapid movement of newly-freed ex-slaves to the city. Without labor to work the fields, agriculture in the area ground to a halt.

A severe race riot in 1866 prompted large numbers of blacks to return to rural areas as sharecroppers, as large-scale cotton farming resumed. Yellow fever epidemics in Memphis during the summers of 1873, 1878, and 1879 decimated the population of the city and halted its beginning industrial development, but had little direct effect on rural areas. City refugees were generally turned away at gunpoint wherever found, and were gathered into large camps at the outskirts of town during the 1878 epidemic (Meeks 1984:42-46; Harkins 1982:88-91). Cotton farming, with periodic fluctuations in prices, continued to be a viable source of income until the arrival of the boll weevil and the fall in prices far below production costs in the early 1920s.

Early arrival of the Great Depression in the area led to large-scale population migration to northern industrial cities and a continuing pattern of rural residents taking city jobs in order to keep their land (Meeks 1984:95-100). Improvements in the local road and rail systems, along with mass production of relatively low-priced automobiles, made suburban living practical. Whitehaven began to grow rapidly as a suburb in the late 1930s. Memphis Municipal Airport was opened in June 1929 and received major improvements by the WPA during the 1930s. This period also saw extensive drainage and levee work along Nonconnah Creek.

Expansion of the urbanized area in and around Memphis reached the lower quarter of the Nonconnah drainage by 1950 and most of the lower half by the mid-1960s. Construction of the south leg of the perimeter freeway (I-240) around Memphis in the 1960s closely followed the northern margin of the lower half of the floodplain. The postwar era also brought massive landfills (garbage dumps) to the floodplain, often utilizing old gravel pits or borrow pits dug to obtain cover for previous fills. New construction followed the fill operations eastward, a pattern which continues to the present day as development moves into the upper reaches of the drainage.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings

Both the present survey of the Nonconnah Creek project ROW, and the earlier sample survey by Gilbert Commonwealth and Associates, Inc., failed to locate any prehistoric sites or historic remains believed to be greater than 50 years of age. This was due primarily to the tremendous amount of land alteration which has occurred along and within the Nonconnah Creek floodplain.

The chief contribution of the present report, therefore, is the synthesis and presentation of the site data collected in the 1950s, '60s, and early '70s. Many, if not all, of these sites no longer exist, or are buried beneath 10 to 40 ft of fill. Thus, it is likely that the information summarized here will be the only data available on the prehistory of the drainage. It is hoped that the presentation of this information has made this report a useful document.

Recommendations

The following discussion and recommendations are offered as guides for future research:

1. Only one structure, the set of pilings at the mouth of the creek, was located during the survey. Although the structure was not tested, it is believed that enough information was collected to determine that it is not eligible for inclusion in the National Register of Historic Places. Therefore, no further work is required at the locale.

2. The vast majority of the project ROW has been extensively altered by land fills and/or borrow pits. In many cases the fill is as much as 10 to 40 ft thick, and consists primarily of building rubble, such as bricks, cement slabs, wooden frames, etc. Not only has the fill obscured the past floodplain, but it has effectively sealed it from any moderate program of deep testing. Unless the fill can be completely removed from an area, it is unlikely a backhoe, or similar excavation machine, can penetrate the rubble to a depth necessary to reach the original ground surface.

3. In the few areas of intact floodplain, a backhoe could be employed in a deep testing program. However, field inspection suggested that much, if not all, of the upper few meters of the floodplain deposit consisted of relatively recent alluvium. In some cases, plastic bags and cut wooden boards were eroding out of the deposit about 4 m below the surface of the top bank.

As noted earlier, underlying much of this alluvium were the organic layers of presumably late Pleistocene (or early Holocene) age. It is presently impossible, however, to identify the specific location of any organic deposits which are of an age young enough to produce cultural remains. A detailed program of geological mapping, dating, and analyses would be required before any of the organic remains could be considered a likely candidate for examination.

Therefore, in lieu of such a detailed and probably cost-prohibitive program, it is recommended that a monitoring program be established so that an archaeologist can be on hand either when a new channel is cut or dredged, or immediately following the action. Inspection of the newly exposed remains could then determine whether or not cultural material is present and if further investigations are needed. This monitoring

program could also include the collection of organic samples which could be dated and analyzed by biologists, zoologists, palynologists, etc., to provide more data on the paleoenvironment of the region.

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